

North Slope

Rapid Ecoregional Assessment

Memorandum II: Data Discovery



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Acronyms used in this document

ADF&G	Alaska Department of Fish & Game
ADNR	Alaska Department of Natural Resources
AKGAP	Alaska Gap Analysis Program
AKNHP	Alaska Natural Heritage Program
ALFRESCO	Alaska Frame-based EcoSystem Code
AMT	Assessment Management Team
AWC	Anadromous Waters Catalog
BLM	Bureau of Land Management
CA	Change Agent
CE	Conservation Element
ESRI	Environmental Services Research Institute
GCM	Global Circulation Model
GIPL	Geophysical Institute Permafrost Lab
HUC	Hydrologic Unit Code
ISER	Institute of Social and Economic Research
LCM	Landscape Condition Model
MAGT	Mean Annual Ground Temperature
MQ	Management Question
NHD	National Hydrography Dataset
NLCD	National Land Cover Database
REA	Rapid Ecoregional Assessment
SNAP	Scenarios Network for Alaska and Arctic Planning
Tech Team	Technical Team
TEK	Traditional Ecological Knowledge
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
YKL	Yukon Lowlands – Kuskokwim Mountains – Lime Hills

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Introduction

This memorandum summarizes data availability for the proposed conservation elements (CEs), change agents (CAs), and management questions (MQs) as part of Task 2, Phase 1 for the North Slope Rapid Ecological Assessment (REA). The datasets that may potentially inform the analyses of CEs, CAs, and MQs are listed in this memorandum in a series of tables. The datasets presented here are working lists: some proposed datasets may be removed, while datasets identified later during the course of the project may be added. This memorandum is the second version provided to the AMT and Technical Team, and considers comments received during the Data Discovery Webinar, which took place on Dec. 5, 2013.

Objectives

The objectives of Task 2 are:

1. Identify potential data to be used for the assessment.
2. Evaluate the data for utility (content, scale, completeness).
3. Evaluate the data quality (precision, consistency, documentation).
4. Make recommendations about data to be applied.
5. Identify data gaps (including limitations in accuracy and consistency within ecoregions) and evaluate if alternative MQs, CEs, and CAs should be proposed.

The goal of data discovery was to obtain source datasets that would then allow us to move forward with additional processing steps. Identification of suitable methods and data is an iterative process. Identification of useable datasets prior to the finalization of methods will necessarily be incomplete. Although many datasets have been identified, much of the data that will be required for analysis is largely dependent on the methods selected, which will be identified and approved during Task 3 of Phase I.

Task 2 objectives include evaluating the data for 11 quality criteria. Ideally, each data layer should be opened, inspected, and evaluated according to these 11 criteria. However, due to the amount of time it takes to evaluate the 11 quality criteria, and because additional datasets are continuing to be brought to our attention, we elected to defer data evaluation until we identify a final set of data layers. As such, this memo represents a status report on the state of data discovery to-date, with the caveat that full data quality evaluations will be conducted for all final source datasets.

Process Models

Process models illustrate computational relationships or logical decisions within the context of a spatial or mathematical model to produce an output. Process models diagram data sources, geoprocessing procedures, and workflows, providing analytical transparency and allowing for repeatability of processes in the future.¹ Process models have been developed for each MQ and helped provide direction for data

¹ Bryce, S., J. Strittholt, B. Ward, and D. Bachelet. 2012. Colorado Plateau Rapid Ecoregional Assessment Final Report. Prepared for National Operations Center, Bureau of Land Management, U.S. Department of the Interior. Submitted by Dynamac Corporation and Conservation Biology Institute. Denver, CO. 183 pp.

discovery. However, the full set of MQ related process models will not be presented until Memorandum III: Methods, Models and Tools. Here we provide an example of a process model as it relates to a specific MQ to illustrate their role in the data discovery process.

Conventions for Process Models

Methods for developing process models for all MQs are similar: source datasets are computationally or spatially related to produce outputs that are further related to produce final products. Process models are diagrammed according to the conventions in Figure 1 below¹.

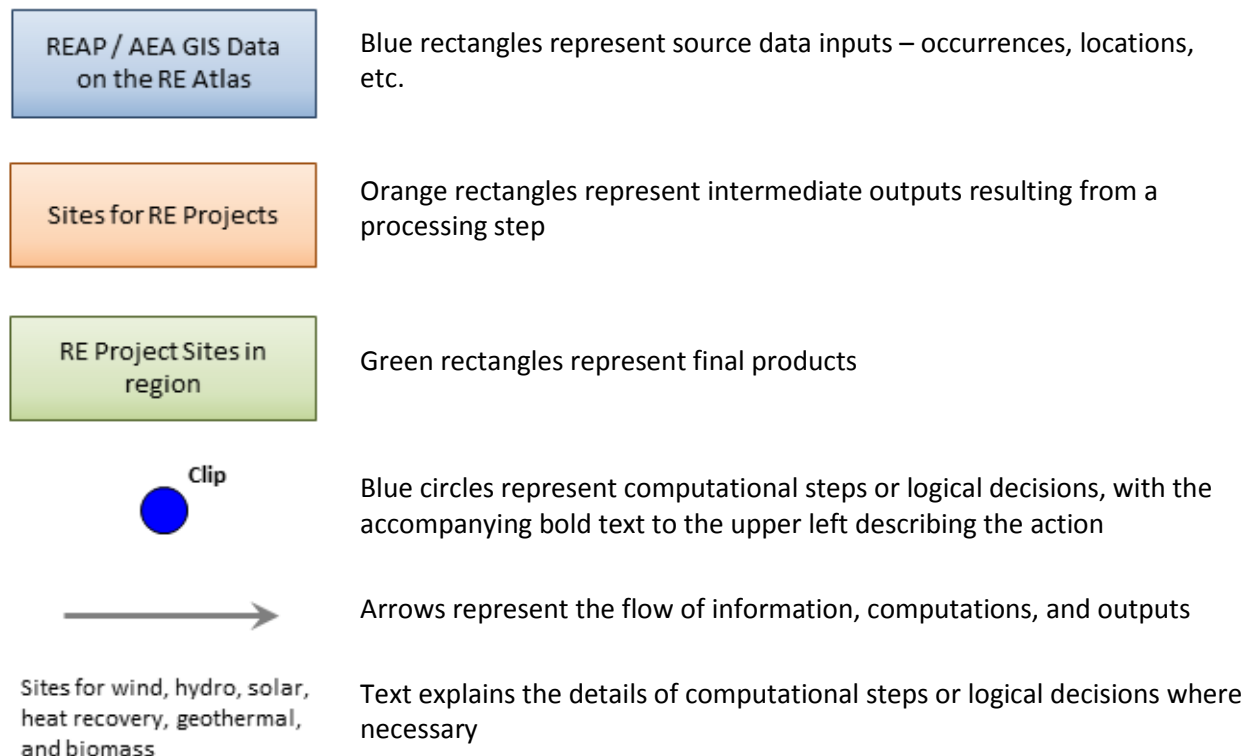


Figure 1: Conventions for Process Models.

Example Process Model for MQ AC 1

Figure 2 below is an example of a process model. Source datasets are represented by the blue boxes, intermediate products (results) are represented by the orange boxes, and the final result is represented by the green box. The datasets necessary to perform the analysis outlined by the process model are listed in Table 1.

To provide a geospatial product that will answer MQ AC 1, features related to oil and gas activities are extracted from the BLM and North Slope Borough maps of current and potential development areas, producing a data set for water withdrawal activities. The NHD lakes and 2009 SAR lake winter liquid

datasets are clipped to the North Slope study area and merged, producing a data set for lakes on the North Slope. Water withdrawal activities and lakes on the North Slope are overlaid with each other according to the Alaska water quality standards, producing a data set for water quality on North Slope lakes. Distribution models of CEs are overlaid with water quality on North Slope lakes to produce a geospatial representation of areas where water withdrawal activities from oil and gas industries will impact CEs.

MQ AC 1: How does water withdrawal from lakes for oil and gas activities (year-round industrial and domestic use and winter operations) affect lake water quantity and water quality, outflow/stream connectivity, and down-basin stream habitat?

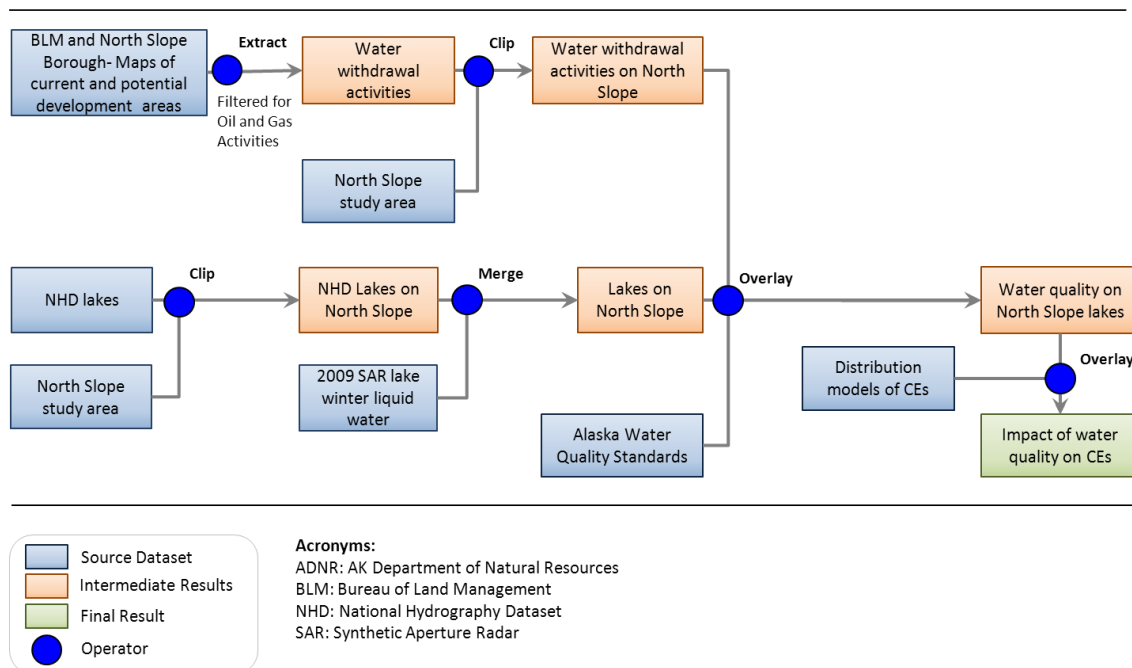


Figure 2: Process Model for MQ AC 1.

Table 1: Datasets for MQ AC 1.

MQ AC 1: How does water withdrawal from lakes for oil and gas activities (year-round industrial and domestic use and winter operations) affect lake water quantity and water quality, outflow/stream connectivity, and down-basin stream habitat?		
Dataset Name	Data source	Status
NPRA Oil and gas infrastructure and development	BLM	Obtained
North Slope Borough development layers	Planning Department, North Slope Borough	Data sharing agreement - in progress
National hydrography dataset	USGS	Obtained
Alaska water quality standards	DEC	Obtained
Mapping lakes for winter liquid water availability using SAR on the North Slope of Alaska	GINA	Data requested

Proposed datasets for CEs, CAs, and MQs

A summary of all CEs and CAs selected for analysis in the North Slope REA and the number of MQs by disciplinary topic is provided in Table 2. Additional details on CEs and CAs are provided within their corresponding sections. A list of all MQs is provided in Table 3.

Many datasets identified in this memorandum will be required for multiple analyses. To avoid redundancy, datasets are grouped by CEs and CAs into the following categories:

- a. Terrestrial Coarse-Filter CEs
- b. Aquatic Coarse-Filter CEs
- c. Terrestrial Fine-Filter CEs
- d. Aquatic Fine Filter CEs
- e. Climate Change
- f. Permafrost
- g. Fire
- h. Invasive Species
- i. Anthropogenic Uses

Most of the MQs require datasets that are also required for the analyses of CEs and CAs. Therefore, MQs are discussed in the context of the CEs and CAs to which they correspond. For example, MQs that require datasets related to Terrestrial Coarse-Filter CEs are discussed within the section for Terrestrial Coarse-Filter CEs. Some MQs require datasets from multiple groups of CEs or CAs. In such cases, the MQ is listed in each section for which there exists necessary data.

The dataset tables provided in this memo catalog all datasets identified to date to inform the analyses of CEs, CAs, and MQs. The first column in each dataset table lists one or more MQs, identified by their alphanumeric code. Data required to answer the MQ are identified in the second column. A code "DM"

in the first column indicates that the dataset identified in the second column may be used to build the distribution model for one or more CEs or CAs.

Spatial datasets were identified where available and relevant. However, in some cases, spatial data is either unavailable or not applicable. In such cases, either tabular data were identified or a review of available literature will be conducted. Three MQs listed at the end of this memorandum will be addressed solely through literature review. Data gaps are explained under individual CE or CA dataset tables.

Table 2: Proposed CEs and CAs with number of associated MQs in parentheses.

Coarse-Filter CEs		Fine-Filter CEs (3)		CAs		
Terrestrial (6)	Aquatic (4)	Terrestrial (4)	Aquatic (2)	Category	Subcategory	
Coastal plain: high-centered polygon (and flat-topped) tundra	Deep connected lakes	Caribou (<i>Rangifer tarandus</i>)	Broad whitefish (<i>Coregonus nasus</i>)	Abiotic Factors - Climate	Precipitation	
					Temperature	
Coastal plain: river dunes	Shallow connected lakes	Nearctic brown lemming (<i>Dicrostonyx trimucronatus</i>)	Dolly Varden (<i>Salvelinus malma</i>)		Thaw Date	
					Freeze Date	
Coastal plain: basin wet meadow and marsh	Large and small streams	Arctic fox (<i>Vulpes lagopus</i>)	Arctic grayling (<i>Thymnallus arcticus</i>)		Cliomes	
Foothills: moist tussock and sedge-shrub tundra		Lapland longspur (<i>Calcarius lapponicus</i>)	Burbot (<i>Lota lota</i>)	Abiotic Factors - Fire (1)	Return Interval	
					Vegetation Response	
					Abiotic Factors - Permafrost (1)	Ground Temperature
						Active Layer Thickness
					Invasive Species	
Tidal marsh		Willow ptarmigan (<i>Lagopus lagopus</i>)		Anthropogenic Factors (2)	Subsistence	
Marine beach / beach meadow		Greater white-fronted goose (<i>Anser albifrons</i>)			Natural Resource Extraction	
Alpine barrens					Transportation and Communication Infrastructure	
Permafrost					Recreation	
					Energy Development	

Management Questions

MQs reflect critical resource and management concerns in the region and focus the REA on those concerns. The Assessment Management Team (AMT) for the North Slope REA prioritized a list of 20 MQs

through an iterative scoring process (Table 3). Throughout this memorandum, MQs will be referenced by 3-digit alpha-numeric codes (e.g., AB 1).

Table 3: High priority MQs selected by the AMT.

Abiotic Factors	
AB 1	Is the fire regime changing on the North Slope and what is the likely future fire regime (or range of regimes) based on climate projections and current knowledge of the relationships between climate and fire?
AB 2	How will permafrost change spatially and temporally over the next two decades?
Anthropogenic Factors	
AP 1	What physical and perceptual limitations to access to subsistence resources by local residents are caused by oil/gas activities?
AP 2	How are oil, gas, and mineral development on the North Slope impacting near- and far-field air quality, with particular emphasis on communities and “sensitive class 2” areas such as ANWR, Gates, Noatak?
Aquatic Coarse-Filter CEs	
AC 1	How does water withdrawal from lakes for oil and gas activities (year-round industrial and domestic use and winter operations) affect lake water quantity and water quality, outflow/stream connectivity, and down-basin stream habitat?
AC 2	How does oil and gas infrastructure (e.g. roads, pads, pipeline), both permanent and temporary, affect fish habitat, fish distribution, and fish movements?
Aquatic Fine-Filter CEs	
AF 1	What are baseline characteristics and trends in fish habitat (lakes and streams), fish distribution, and fish movements?
AF 2	What are the measurable and perceived impacts of development on subsistence harvest of fish?
Aquatic and Terrestrial Fine-Filter CEs (non-spatial questions involving multiple CEs)	
AT 1	What parameters can help measure impacts from anthropogenic activities independently of natural cycles and vice versa?
AT 3	What additional contaminants baseline data are needed for fish, birds, marine and terrestrial species, particularly those that affect the health and safety of subsistence foods?
Terrestrial Coarse-Filter CEs	
AT 2	What potential impacts will oil/gas exploration and development have on CE habitat?

TC 1	What are the impacts of oil/gas development (i.e. gravel pad and road construction; pipeline construction) on vegetation and hydrology? (Known impacts include burial, dust, saline runoff and altered soil moisture.)
TC 2	What are the changes in habitat and vegetation related to changing permafrost conditions, and what will these changes mean to wildlife and habitats?
TC 3	How will changes in precipitation, evapotranspiration, and active layer depth alter summer surface water availability in shallow-water and mesic/wet tundra habitats and how reliable are these projections?
TC 4	What are the expected changes to habitat as a result of coastal erosion and coastal salinization?
TC 5	How is climate change affecting the timing of snow melt and snow onset, spring breakup and green-up, and growing season length?
Terrestrial Fine-Filter CEs	
TF 1	What are the baseline data for the species composition, numbers of individuals, vegetation type used, and change in numbers/species composition of landbirds and their habitat over time?
TF 2	What are caribou preferences for vegetation communities? Where do these vegetation communities exist?
TF 3	What are the measurable and perceived impacts of development on subsistence harvest of caribou?
TF 4	What are caribou seasonal distribution and movement patterns and how are they related to season and weather?

Conservation Elements

CEs are defined as biotic constituents (i.e. wildlife and plant species or assemblages) or abiotic factors (i.e. soils) of regional importance in major ecosystems and habitats across the ecoregion. Selected CEs are meant to represent key resources in the ecoregion and may serve as surrogates for ecological condition across the ecoregion. CEs were identified through the MQs and/or were derived from the Ecoregional Conceptual Model (<http://aknhp.uaa.alaska.edu/landscape-ecology/north-slope-rea/conceptual-ecoregional-model/#content>) to ensure the integration of practical management concerns with current scientific knowledge.

Coarse-Filter CEs

Terrestrial and Aquatic Coarse-Filter CEs represent the dominant ecological patterns of the ecoregion. Coarse-filter CEs include regionally significant terrestrial vegetation types and aquatic ecosystems within the assessment area. They represent the habitat requirements of most characteristic native species, ecological functions, and ecosystem services.

Terrestrial Coarse-Filter CEs

Terrestrial Coarse-Filter CEs are regionally important Biophysical Settings (i.e. potential vegetation; ecological site types) that represent the characteristic vegetation assemblages, succession and dominant ecological patterns of the North Slope Ecoregion. They adequately address the habitat requirements of most characteristic native species, ecological functions, and ecosystem services.

We recommend using two maps for the REA: an existing NSSI land cover vegetation map and a Biophysical Settings map. We will use the existing vegetation map to model species distributions, and the Biophysical Setting map to delineate the Coarse-Filter CEs. The datasets proposed for the analysis of Terrestrial Coarse-Filter CEs and associated MQs are listed in Table 4 below.

The following MQs require data related to Terrestrial Coarse-Filter CEs:

AT 2. What potential impacts will oil/gas exploration and development have on CE habitat?

- This question requires data from Terrestrial Coarse-Filter CEs and Anthropogenic Uses.

TC 1. What are the impacts of oil/gas development (i.e. gravel pad and road construction; pipeline construction) on vegetation and hydrology? (Known impacts include burial, dust, saline runoff and altered soil moisture.)

- This question requires data from Terrestrial Coarse-Filter CEs and Anthropogenic Uses.

TC 2. What are the changes in habitat and vegetation related to changing permafrost conditions, and what will these changes mean to wildlife and habitats?

- This question requires data from Terrestrial Coarse-Filter CEs, Climate Change (climates), and Permafrost (active layer thickness and mean annual ground temperature). A literature review will be conducted to link permafrost thaw to impacts on CEs. Currently, these linkages are a potential data gap.

TC 3. How will changes in precipitation, evapotranspiration, and active layer depth alter summer surface water availability in shallow-water and mesic/wet tundra habitats and how reliable are these projections?

- This question requires data from Terrestrial Coarse-Filter CEs, Climate Change (precipitation and potential evapotranspiration), and Permafrost (active layer thickness). It also requires an algorithm for linking abiotic variables with shallow-water and mesic-wet tundra. Currently, such an algorithm is a potential data gap.

TC 4. What are the expected changes to habitat as a result of coastal erosion and coastal salinization?

- This question requires data from Terrestrial Coarse-Filter CEs. This task will require a review of all pertinent literature on the topic.

TF 2. What are caribou preferences for vegetation communities? Where do these vegetation communities exist?

- This question requires data for Terrestrial Coarse-Filter CEs, Terrestrial Fine-Filter CEs, and Fire. There is currently no dataset that represents snow depth on the North Slope. Such a dataset would remove areas of deep snow from consideration as preferred winter forage areas. During the Data Discovery Webinar we learned that efforts to develop historical snow datasets for the North Slope are in progress and that draft products should be available soon. This effort is being coordinated by Glenn Liston, from Colorado State, for the Arctic LCC.

Table 4. Datasets for Terrestrial Coarse Filter CEs.

Dataset Use	Dataset Name	Data source	Status
AT2, TC1, TC2, TC3, TC4, TF2, DM	NSSI Land Cover Map	Ducks Unlimited 2013	Obtained
AT2, TC1, TC2, TC3, TC4, TF2, DM	USDI National Wetlands Inventory map	USDI, NWI	Obtained
AT2, TC1, TC2, TC3, TC4, TF2, DM	Physiographic subsections	Jorgenson and Grunblatt 2013	Obtained
AT2, TC1, TC2, TC3, TC4, TF2, DM	Alaska coastline shapefiles	NOAA nautical charts	Obtained

Aquatic Coarse-Filter CEs

The North Slope lacks the aquatic habitat map necessary to define Aquatic Coarse-Filter CEs by habitat. Instead, Aquatic Coarse-Filter CEs will represent several common categories of water bodies defined by the National Hydrography Dataset (NHD). The NHD is the best available spatial data of aquatic resources for the REA study area. It is a digital representation of the stream network and lakes shown on USGS topographic maps, which were created from historic aerial photos. It has several limitations:

- The NHD underrepresents small streams because they are often masked by vegetation cover and not visible in aerial photography.
- The NHD is very outdated (most topographic maps were created in the 50's and 60's) and stream locations and lake areas have likely changed due to natural hydrologic disturbances and climate change.
- Both stream order and stream gradient are needed to map aquatic habitats; the NHD is not attributed with stream order and does not align with valley bottoms in the digital elevation model (DEM) so stream gradient cannot be calculated accurately.

Datasets proposed for Aquatic Coarse-Filter CEs and associated MQs are listed in Tables 5 and 6 below.

The following MQs require data related to Aquatic Coarse-Filter CEs:

AC 1. How does water withdrawal from lakes for oil and gas activities (year-round industrial and domestic use and winter operations) affect lake water quantity and water quality, outflow/stream connectivity, and down-basin stream habitat?

- This question requires data from Aquatic Coarse-Filter CEs and Anthropogenic Uses. Assessment of water quality is a potential data gap. Additionally, modeling outflow/stream connectivity may not be possible due to lack of data.

AC 2. How does oil and gas infrastructure (e.g. roads, pads, pipeline), both permanent and temporary, affect fish habitat, fish distribution, and fish movements?

- This question requires data from Aquatic Coarse-Filter CEs, Aquatic Fine-Filter CEs, and Anthropogenic Uses.

AF 1. What are baseline characteristics and trends in fish habitat (lakes and streams), fish distribution, and fish movements?

- This question requires data from Aquatic Coarse-Filter CEs and Aquatic Fine-Filter CEs.

AF 2. What are the measurable and perceived impacts of development on subsistence harvest of fish?

- This question requires data from Aquatic Coarse-Filter CEs and Anthropogenic Uses. Perceived impacts may be recorded in numerous scattered reports compiled by various agencies over the years. Compiling this information, which is often referred to as Traditional Ecological Knowledge (TEK), from these sources may be beyond the scope of this project.

Table 5. Datasets for Deep and Shallow Connected Lakes.

Dataset Use	Dataset Name	Data source	Status
AF1, AC1, AC2, DM	National Hydrography Dataset Waterbodies	USGS	Obtained
AF1, AC1, AC2, DM	National Hydrography Dataset Flowlines	USGS	Obtained
DM	NPRA Oil and gas infrastructure and development	BLM	Obtained
AC1, DM	Alaska water quality standards	DEC	Obtained
AC1, DM	Mapping lakes for winter liquid water availability using SAR on the North Slope of Alaska	GINA/Grunblatt and Atwood	Obtained
AF2	BLM subsistence harvest use areas	BLM	Obtained
AC1, AC2	Alaska Stand-Alone Gas Pipeline EIS	U.S. Army Corps of Engineers	To be requested
AC1, AC2, AF2	Survey of lakes in association with the 2005 NPRA ice road Final Data Report	MJM Research	To be requested

Dataset Use	Dataset Name	Data source	Status
	December 2004		
AC1, AC2, DM	Lake stocking database	ADF&G	Obtained
DM	Lake survey	UAF-Trevor Haynes	Requested
AC1, AC2, DM	Fish Creek Watershed-Lake Mapping	BLM, USFWS, UAF, USGS	To be requested

Table 6. Datasets for Large and Small Streams.

Dataset Use	Dataset Name	Data source	Status
AF1, AC1, AC2, DM	National Hydrography Dataset Waterbodies	USGS	Obtained
AF1, AC1, AC2, DM	National Hydrography Dataset Flowlines	USGS	Obtained
DM	NPRA Oil and gas infrastructure and development	BLM	Obtained
AF2	BLM subsistence harvest use areas	BLM	Obtained
AC1, AC2	Alaska Stand-Alone Gas Pipeline EIS	U.S. Army Corps of Engineers	To be requested
AC2	A survey of stream crossing structures in the North Slope oilfields	ADNR	To be requested
AF1,DM	Seasonal movements of Arctic grayling in a small beaded stream in the NPRA-Alaska	UAF-Kurt Heim	Obtained

Fine-Filter CEs

Fine-Filter CEs represent species that are critical to the assessment of the ecological condition of the North Slope study area for which habitat is not adequately represented by the Coarse-Filter CEs. Fine-Filter CEs selected for the North Slope REA are represented by regionally significant mammal, bird, and fish species.

Terrestrial Fine-Filter CEs

Seven species or species assemblages were selected as Terrestrial Fine-Filter CEs for the North Slope REA. An effort was made to select species representative of different ecological niches. For example, Greater white-fronted geese broadly represent waterfowl resources for the REA. Datasets proposed for Terrestrial Fine-Filter CEs and associated MQs are listed in Tables 7, 8, 9, 10, 11, 12, 13, and 14 below.

The following MQs relate to Terrestrial Fine-Filter CEs (caribou):

TF 2. What are caribou preferences for vegetation communities? Where do these vegetation communities exist?

- This question requires data for Terrestrial Coarse-Filter CEs, Terrestrial Fine-Filter CEs, and Fire. Datasets necessary to answer this question are provided under Terrestrial Coarse-Filter CE, Table 4. See notes about snow depth data availability under Terrestrial Coarse-Filter CE discussion of TF2.

TF 3. What are the measurable and perceived impacts of development on subsistence harvest of caribou?

- This question requires data for Terrestrial Fine-Filter CEs and Anthropogenic Uses. Perceived impacts may be recorded in numerous scattered reports compiled by various agencies over the years. Compiling this information, which is often referred to as Traditional Ecological Knowledge (TEK), from these sources may be beyond the scope of this project.

TF 4. What are caribou seasonal distribution and movement patterns and how are they related to season and weather?

- This question requires data for Terrestrial Fine-Filter CEs for the four caribou herds that regularly occur on the North Slope: Western Arctic, Central Arctic, Porcupine and Teshekpuk.

Table 7. Datasets for caribou (*Rangifer tarandus*).

Dataset Use	Dataset Name	Data source	Status
TF3	Nuiqsut Caribou Subsistence Monitoring	Braund and Associates for Conoco Phillips	Obtained
TF3	Caribou Demography, Distribution and Movements in Relation to Oil Field Infrastructure	Alaska Department of Fish and Game	Pending
TF3	Subsistence harvest use areas	BLM	Obtained
TF3	NPRA Oil and gas infrastructure and development	BLM	Obtained
TF3	Alaska Stand-Alone Gas Pipeline EIS	U.S. Army corps of Engineers	Request pending
TF4, DM	Seasonal range polygons for all caribou herds	Tom Paragi, Alaska Department of Fish and Game	Obtained
TF4, DM	Caribou calving areas on the North Slope, all herds	NSSI catalog	Graphic obtained, spatial data pending
TF4, DM	Distribution and seasonal migrations of caribou in ANWR	USFWS	Request pending
DM	Alaska Natural Heritage Program vertebrate polygon range maps- caribou	AKNHP	Obtained
DM	Alaska Gap Analysis terrestrial vertebrate occurrence database - caribou	Alaska Gap Analysis Project, AKNHP	Obtained
DM	Caribou Demography, Distribution and Movements in Relation to Oil Field Infrastructure	Alaska Department of Fish and Game	ADF&G Data sharing agreement – in progress
DM	Alpine Satellite Development Program (ASDP) Caribou Monitoring Program	Conoco Phillips	Requested

Dataset Use	Dataset Name	Data source	Status
<i>Western Arctic Caribou Herd (WACH)</i>			
TF4	Satellite/radio collar data 1988 to 2010*	Alaska Department of Fish and Game	ADF&G Data sharing agreement – in progress
TF4	Calving locations of collared maternal cows WAH 1988-1989, 1992-2012*	Alaska Department of Fish and Game	ADF&G Data sharing agreement – in progress
TF4	Monitoring of the Western Arctic Herd by NPS in cooperation with BLM and ADFG	National Park Service	Requested
<i>Teshekpuk Caribou Herd (TCH)</i>			
TF4, DM	Satellite/radio collar data 1990 to 2009*	Alaska Department of Fish and Game	ADF&G Data sharing agreement – in progress
TF4, DM	Locations of collared maternal cows 1994-2010*	Alaska Department of Fish and Game	ADF&G Data sharing agreement – in progress
TF4, DM	Distribution and movement of the Teshekpuk Lake herd – 72 satellite-collared and 10-GPS collared caribou*	B. Person , North Slope Borough Wildlife Dept.	Requested
TF4, DM	Mosquito relief kernel density Teshekpuk; fly relief kernel density	NPRA EIS and the Nature Conservancy	In progress
<i>Central Arctic Caribou Herd (CAH)</i>			
TF4, DM	Locations of collared caribou CAH 1986-present*	Alaska Department of Fish and Game	ADF&G Data sharing agreement – in progress
TF4, DM	Calving locations of collared maternal cows CAH*	Alaska Department of Fish and Game	ADF&G Data sharing agreement – in progress

Dataset Use	Dataset Name	Data source	Status
<i>Porcupine Caribou Herd (PCH)</i>			
TF4, DM	Locations of collared caribou Porcupine 1979-present*	Alaska Department of Fish and Game	ADF&G Data sharing agreement – in progress
TF4, DM	Calving locations of radio-collared maternal cows Porcupine herd 1980-2010*	Alaska Department of Fish and Game	ADF&G Data sharing agreement – in progress

* Data requested is for either the raw collar data or derivatives thereof; e.g., we would prefer to have kernel density estimates for calving locations of collared maternal cows as opposed to the raw data, when available.

Table 8. Datasets for Nearctic brown lemming (*Dicrostonyx trimucronatus*)

Dataset Use	Dataset Name	Data source	Status
DM	Alaska Natural Heritage Program vertebrate polygon range maps-nearctic brown lemming	AKNHP	Obtained
DM	Alaska Gap Analysis terrestrial vertebrate occurrence database - nearctic brown lemming*	Alaska Gap Analysis Project, AKNHP	Obtained
DM	Gap Analysis final distribution model for the nearctic brown lemming.	Alaska Gap Analysis Project, AKNHP	Obtained

*Sources for Gap Analysis Vertebrate Occurrence records for Nearctic brown lemming include:

- Global Biodiversity Information Facility (GBIF). 2011. Data provided from GBIF Biodiversity Data Index. <<http://data.gbif.org>> Accessed January 2011. (accessed through GBIF data portal, Vertebrate specimens, <http://data.gbif.org/da>).

Table 9. Datasets for Arctic fox (*Vulpes lagopus*).

Dataset Use	Dataset Name	Data source	Status
DM	Alaska Natural Heritage Program vertebrate polygon range maps- arctic fox	AKNHP	Obtained
DM	Alaska Gap Analysis terrestrial vertebrate occurrence database – arctic fox*	Alaska Gap Analysis Project, AKNHP	Obtained
DM	Fox control sites	USFWS	Obtained
DM	Fox den long term monitoring at Prudhoe Bay	ABR	Obtained
DM	Arctic fox continuing studies	NSB Wildlife Dept.	Requested
DM	Winter movements of Arctic foxes in Northern Alaska measured by satellite telemetry	Nathan Pamperin, Master's Thesis	Requested

*Sources for Gap Analysis Vertebrate Occurrence records for arctic fox include:

- Global Biodiversity Information Facility (GBIF). 2011. Data provided from GBIF Biodiversity Data Index. <<http://data.gbif.org>> Accessed January 2011. (Accessed through GBIF data portal, Vertebrate specimens, <http://data.gbif.org/da>).
- Larned, W., R. Stehn, and R. Platte. 2006. Eider breeding population survey Arctic Coastal Plain, Alaska 2006. U. S. Fish and Wildlife Service, Migratory Bird Management, Soldotna, AK.

Table 10. Datasets for Lapland longspur (*Calcarius lapponicus*).

Dataset Use	Dataset Name	Data source	Status
DM	Alaska Natural Heritage Program vertebrate polygon range maps- Lapland longspur	AKNHP	Obtained
DM	Alaska Gap Analysis terrestrial vertebrate occurrence database - Lapland longspur*	Alaska Gap Analysis Project, AKNHP	Obtained
DM	Gap Analysis final distribution model for the Lapland longspur	Alaska Gap Analysis Project, AKNHP	Obtained

*Sources for Gap Analysis Vertebrate Occurrence records for Lapland Longspur include:

- Andres, B. A., D. L. Brann, and B. T. Browne. 1999. Inventory of breeding birds on local training areas of the Alaska Army National Guard. Nongame Migratory Bird Management, U. S. Fish and Wildlife Service, Anchorage, AK.
- Global Biodiversity Information Facility (GBIF). 2009. Data provided from GBIF Biodiversity Data Index. <<http://www.asia.gbif.net/portal/index.jsp>> Accessed October 2009
- Hauptert, C. 2009. Toolik Field Station Point Count Survey. Toolik Field Station, University of Fairbanks, Fairbanks, AK.
- Liebezeit, J. and S. Zack. 2008. Breeding bird, diversity, density, nesting success and nest predators in the Olak region of the Teshekpuk Lake Special Area and Prudhoe Bay Oilfield. Prepared for North Slope Borough, U. S. Fish and Wildlife Service and BLM by Wildlife Conservation Society, Portland, OR.

- Mallek, E. J., R. Platte, and R. Stehn. 2007. Aerial breeding pair surveys of the arctic coastal plain of Alaska - 2006. U. S. Fish and Wildlife Service, Waterfowl Management, Fairbanks, AK.
- McMillan T. 2004. Observations of breeding birds along major drainages in the Brooks Range, Alaska. U.S. Fish & Wildlife Service, Fairbanks, AK.
- Niemitz, D. 2008. An assessment of sampling detectability for global biodiversity monitoring: Results from sampling grids in different climatic regions. Georg-August-Universitaet Goettingen, Goettingen, Germany.
- Tibbitts, T. L., D. R. Ruthrauff, R. E. Gill, Jr., and C. M. Handel. 2005. Inventory of montane-nesting birds in the Arctic Network of National Parks, Alaska. Arctic Network Inventory and Monitoring Program, USDI National Park Service. NPS/AKARN/NRTR-2006/02. Fairbanks, AK. 156 pp.
- USGS Patuxent Wildlife Research Center. 2008. North American Breeding Bird Survey Internet dataset, 03 November 2008 (<http://www.pwrc.usgs.gov/bbs/retrieval/>).

Table 11. Datasets for raptor concentration areas*.

Dataset Use	Dataset Name	Data source	Status
DM	Alaska Gap Analysis terrestrial vertebrate occurrence database - peregrine falcon**	Alaska Gap Analysis Project, AKNHP	Obtained
DM	Gap Analysis final distribution model for the Peregrine Falcon	Alaska Gap Analysis Project, AKNHP	Obtained
DM	Peregrine falcon surveys in interior and northern Alaska, 1990	Bureau of Ocean Energy Management	Obtained
DM	Site occupancy of cliff nesting raptors in Arctic NWR	USFWS, Arctic NWR	Requested
DM	Peregrine falcon locations in NPR-A	BLM, NPRA EIS	Requested
DM	Alaska Natural Heritage Program vertebrate polygon range maps- gyrfalcon	AKNHP	Obtained
DM	Alaska Gap Analysis terrestrial vertebrate occurrence database – gyrfalcon***	Alaska Gap Analysis Project, AKNHP	Obtained
DM	Gap analysis final distribution model for the gyrfalcon.	Alaska Gap Analysis Project, AKNHP	Obtained
DM	Alaska Natural Heritage Program vertebrate polygon range maps- Rough-legged hawk	AKNHP	Obtained
DM	Alaska Gap Analysis terrestrial vertebrate occurrence database – Rough-legged hawk****	Alaska Gap Analysis Project, AKNHP	Obtained
DM	Gap Analysis final distribution model for the Rough-legged hawk.	Alaska Gap Analysis Project, AKNHP	Obtained

*Raptor concentration areas include Peregrine falcon (*Falco peregrinus*), Gyrfalcon (*Falco rusticolus*), and Rough-legged hawk (*Buteo lagopus*).

****Sources for Gap Analysis Vertebrate Occurrence records for Peregrine falcon include:**

- Andres, B. A., D. L. Brann, and B. T. Browne. 1999. Inventory of breeding birds on local training areas of the Alaska Army National Guard. Nongame Migratory Bird Management, U. S. Fish and Wildlife Service, Anchorage, AK.
- Bureau of Land Management (BLM). 2000. Raptor - habitat. Bureau of Land Management, AK.
- Bureau of Land Management (BLM). 2002. Colville River raptors. Bureau of Land Management, Northern Field Office, Barrow, AK.
- Global Biodiversity Information Facility (GBIF). 2009. Data provided from GBIF Biodiversity Data Index. <<http://www.asia.gbif.net/portal/index.jsp>> Accessed October 2009
- Oasis Environmental, Inc. 2008. Spectacled and Steller's Eider ground-based nest surveys and avian inventory at six U. S. Air Force radar sites in northern Alaska. Prepared for U. S. Air Force 611th Civil Engineer Squadron, Natural Resources, Elmendorf AFB, AK.
- Swem, T. 1996. North Slope Drainages Raptor Surveys. U.S. Fish and Wildlife Service.
- Swem, T. 1997. Colville River Raptor Nest Survey. U.S. Fish and Wildlife Service.
- Swem, T. 2000. Colville Raptor Surveys. U.S. Fish and Wildlife Service.
- Tibbitts, T. L., D. R. Ruthrauff, R. E. Gill, Jr., and C. M. Handel. 2005. Inventory of montane-nesting birds in the Arctic Network of National Parks, Alaska. Arctic Network Inventory and Monitoring Program, USDI National Park Service. NPS/AKARC/NRTR-2006/02. Fairbanks, AK. 156 pp.
- USGS Patuxent Wildlife Research Center. 2008. North American Breeding Bird Survey Internet dataset, 03 November 2008 (<http://www.pwrc.usgs.gov/bbs/retrieval/>)

*****Sources for Gap Analysis Vertebrate Occurrence records for Gyrfalcon include:**

- Amaral, M. and C. Gardner. 1986. A survey for cliff-nesting birds of prey along the Noatak River, Alaska. U.S. Fish and Wildlife Service, Anchorage, AK.
- Andres, B. A., D. L. Brann, and B. T. Browne. 1999. Inventory of breeding birds on local training areas of the Alaska Army National Guard. Nongame Migratory Bird Management, U. S. Fish and Wildlife Service, Anchorage, AK.
- Bureau of Land Management (BLM). 2000. Raptor - habitat. Bureau of Land Management, AK.
- Britten, M. 1989. 1989 GAAR and adjacent areas raptor survey results. National Park Service, Fairbanks, AK.
- Douglas, H.D. 1991. Unpublished field notes and annotated species accounts from Northwest Alaska.
- Ellis, D.H., J.A. Ball, C.H. Ellis, D.G. Smith, B. Johnson and M.H. Ellis. 1988. Raptors observed in two expeditions on the Noatak River in arctic Alaska, 1988. Confidential report to the National Park Service, Kotzebue, AK.
- Garber, C.S. and C. Flatten. 1988. A survey for cliff nesting birds of prey, Killik River/Chandler Lake areas in Gates of the Arctic National Park and Preserve. Compiled field notes of the authors. National Park Service, Fairbanks, AK.
- Global Biodiversity Information Facility (GBIF). 2009. Data provided from GBIF Biodiversity Data Index. <<http://www.asia.gbif.net/portal/index.jsp>> Accessed October 2009.
- Gill, R.E., M.T. Schroeder, and J. Michael Schnorr. 1996. An assessment of the breeding status of Bristle-thighed Curlews (*Numenius tahitiensis*) and other montane nesting shorebirds within

Cape Krusenstern National Monument, Alaska, 23-27 May and 8-11 July 1996. Unpublished Trip Report, October 1996. National Biological Service, Alaska Science Center. 23 p.

- Manuwal, D.A. 1974. Avifaunal investigations in the Noatak River Valley. Pp. 252-325 in: Young, S.B. (Ed.). The environment of the Noatak River basin, Alaska. Contributions from the Center for Northern Studies No. 1. Center for Northern Studies, Wolcott, VT.
- Ritchie, R.J. 1999. Aerial surveys of cliff-nesting raptors in the northern foothills of the central Brooks Range, Alaska. ABR, Inc. Fairbanks, AK.
- Swanson, S.A. 1992. 1991 raptor surveys: Gates of the Arctic National Park and Preserve. Report GAAR-91-001, U.S. National Park Service, Fairbanks, AK.
- Swem, T. 1996. North Slope Drainages Raptor Surveys. U.S. Fish and Wildlife Service
- Swem, T. 1997. Colville River Raptor Nest Survey. U.S. Fish and Wildlife Service
- Swem, T. 2000. Colville Raptor Surveys. U.S. Fish and Wildlife Service
- Tibbitts, T. L., D. R. Ruthrauff, R. E. Gill, Jr., and C. M. Handel. 2005. Inventory of montane-nesting birds in the Arctic Network of National Parks, Alaska. Arctic Network Inventory and Monitoring Program, USDI National Park Service. NPS/AKARC/NRTR-2006/02. Fairbanks, AK. 156 pp.
- USGS Patuxent Wildlife Research Center. 2008. North American Breeding Bird Survey Internet dataset, 03 November 2008 (<http://www.pwrc.usgs.gov/bbs/retrieval/>)
- Wildman, A. 1991. 1991 Noatak River raptor survey report. NPS, Kotzebue, AK.

****Sources for Gap Analysis Vertebrate Occurrence records for Rough-legged hawk include:

- Bureau of Land Management (BLM). 2000. Raptor - habitat. Bureau of Land Management, AK.
- Bureau of Land Management (BLM). 2002. Colville River raptors. Bureau of Land Management, Northern Field Office, Barrow, AK.
- Global Biodiversity Information Facility (GBIF). 2009. Data provided from GBIF Biodiversity Data Index. <<http://www.asia.gbif.net/portal/index.jsp>> Accessed October 2009
- Hauptert, C. 2009. Toolik Field Station Point Count Survey. Toolik Field Station, University of Fairbanks, Fairbanks, AK.
- Swem, T. 1996. North Slope Drainages Raptor Surveys. U.S. Fish and Wildlife Service
- Swem, T. 1997. Colville River Raptor Nest Survey. U.S. Fish and Wildlife Service
- Swem, T. 2000. Colville Raptor Surveys. U.S. Fish and Wildlife Service
- Tibbitts, T. L., D. R. Ruthrauff, R. E. Gill, Jr., and C. M. Handel. 2005. Inventory of montane-nesting birds in the Arctic Network of National Parks, Alaska. Arctic Network Inventory and Monitoring Program, USDI National Park Service. NPS/AKARC/NRTR-2006/02. Fairbanks, AK. 156 pp.
- USGS Patuxent Wildlife Research Center. 2008. North American Breeding Bird Survey Internet dataset, 03 November 2008 (<http://www.pwrc.usgs.gov/bbs/retrieval/>).

Table 12. Datasets for Willow ptarmigan (*Lagopus lagopus*).

Dataset Use	Dataset Name	Data source	Status
DM	Alaska Natural Heritage Program vertebrate polygon range maps- Willow ptarmigan	AKNHP	Obtained
DM	Alaska Gap Analysis terrestrial vertebrate occurrence database - Willow ptarmigan	Alaska Gap Analysis Project, AKNHP	Obtained
DM	Gap Analysis final distribution model for the Willow ptarmigan.	Alaska Gap Analysis Project, AKNHP	Obtained

*Sources for Gap Analysis Vertebrate Occurrence records for willow ptarmigan include:

- Global Biodiversity Information Facility (GBIF). 2009. Data provided from GBIF Biodiversity Data Index. <<http://www.asia.gbif.net/portal/index.jsp>> Accessed October 2009.
- Hauptert, C. 2009. Toolik Field Station Point Count Survey. Toolik Field Station, University of Fairbanks, Fairbanks, AK.
- Larned, W., R. Stehn, and R. Platte. 2006. Eider breeding population survey Arctic Coastal Plain, Alaska 2006. U. S. Fish and Wildlife Service, Migratory Bird Management, Soldotna, AK.
- Mallek, E. J., R. Platte, and R. Stehn. 2007. Aerial breeding pair surveys of the arctic coastal plain of Alaska - 2006. U. S. Fish and Wildlife Service, Waterfowl Management, Fairbanks, AK.
- McMillan T. 2004. Observations of breeding birds along major drainages in the Brooks Range, Alaska. U.S. Fish & Wildlife Service, Fairbanks, AK.
- Tibbitts, T. L., D. R. Ruthrauff, R. E. Gill, Jr., and C. M. Handel. 2005. Inventory of montane-nesting birds in the Arctic Network of National Parks, Alaska. Arctic Network Inventory and Monitoring Program, USDI National Park Service. NPS/AKARC/NRTR-2006/02. Fairbanks, AK. 156 pp.
- USGS Patuxent Wildlife Research Center. 2008. North American Breeding Bird Survey Internet dataset, 03 November 2008 (<http://www.pwrc.usgs.gov/bbs/retrieval/>).

Table 13. Datasets for Greater white-fronted goose (*Anser albifrons*).

Dataset Use	Dataset Name	Data source	Status
DM	Alaska Natural Heritage Program vertebrate polygon range maps- Greater white-fronted goose	AKNHP	Obtained
DM	Alaska Gap Analysis terrestrial vertebrate occurrence database – Greater white-fronted goose*	Alaska Gap Analysis Project, AKNHP	Obtained
DM	Gap Analysis final distribution model for the Greater white-fronted goose	Alaska Gap Analysis Project, AKNHP	Obtained
DM	Teshkepkuk Lake molting geese survey 2007	Ed Mallek, USFWS	Requested
DM	Greater white-fronted goose estimated relative onshore density 2007-2010	USFWS Migratory Bird Management, from NPRA EIS	Requested

* Sources for Gap Analysis Vertebrate Occurrence records for Greater white-fronted goose include:

- Andres, B. A., D. L. Brann, and B. T. Browne. 1999. Inventory of breeding birds on local training areas of the Alaska Army National Guard. Nongame Migratory Bird Management, U. S. Fish and Wildlife Service, Anchorage, AK.
- Bollinger, K. S., R. M. Platte, R. A. Stehn, and D. K. Marks. Western Alaska Yellow-billed Loon Survey - 2007. U. S. Fish and Wildlife Service, Migratory Bird Management, Fairbanks, AK.
- Dau, C. P. and W. W. Larned. 2007. Aerial population survey of common eiders and other waterbirds in near shore waters and along barrier islands of the Arctic Coastal Plain of Alaska, 22-24 June 2007. U. S. Fish and Wildlife Service, Migratory Bird Management, Anchorage, AK.
- Global Biodiversity Information Facility (GBIF). 2009. Data provided from GBIF Biodiversity Data Index. <<http://www.asia.gbif.net/portal/index.jsp>> Accessed October 2009
- Hauptert, C. 2009. Toolik Field Station Point Count Survey. Toolik Field Station, University of Fairbanks, Fairbanks, AK.
- Larned, W., R. Stehn, and R. Platte. 2006. Eider breeding population survey Arctic Coastal Plain, Alaska 2006. U. S. Fish and Wildlife Service, Migratory Bird Management, Soldotna, AK.
- Mallek, E. J., R. Platte, and R. Stehn. 2007. Aerial breeding pair surveys of the arctic coastal plain of Alaska - 2006. U. S. Fish and Wildlife Service, Waterfowl Management, Fairbanks, AK.
- USGS Patuxent Wildlife Research Center. 2008. North American Breeding Bird Survey Internet dataset, 03 November 2008 (<http://www.pwrc.usgs.gov/bbs/retrieval/>)

Although passerines (bird species belonging to order Passeriformes) are not included as a CE, a data set of passerine occurrences is necessary to answer MQ TF 1:

TF 1. What are the baseline data for the species composition, number of individuals, vegetation type used, and change in number/species composition of landbirds and their habitat over time?

- This question requires data related to Terrestrial Fine-Filter CEs.

Table 14. Datasets for passerines.

Dataset Use	Dataset Name	Data source	Status
TF1	Alaska Gap Analysis terrestrial vertebrate occurrence database – passerines*	Alaska Gap Analysis Project, AKNHP	Obtained

* Sources for Gap Analysis Vertebrate Occurrence records for passerines include: 14,507 records for 59 species from 41 data sources.

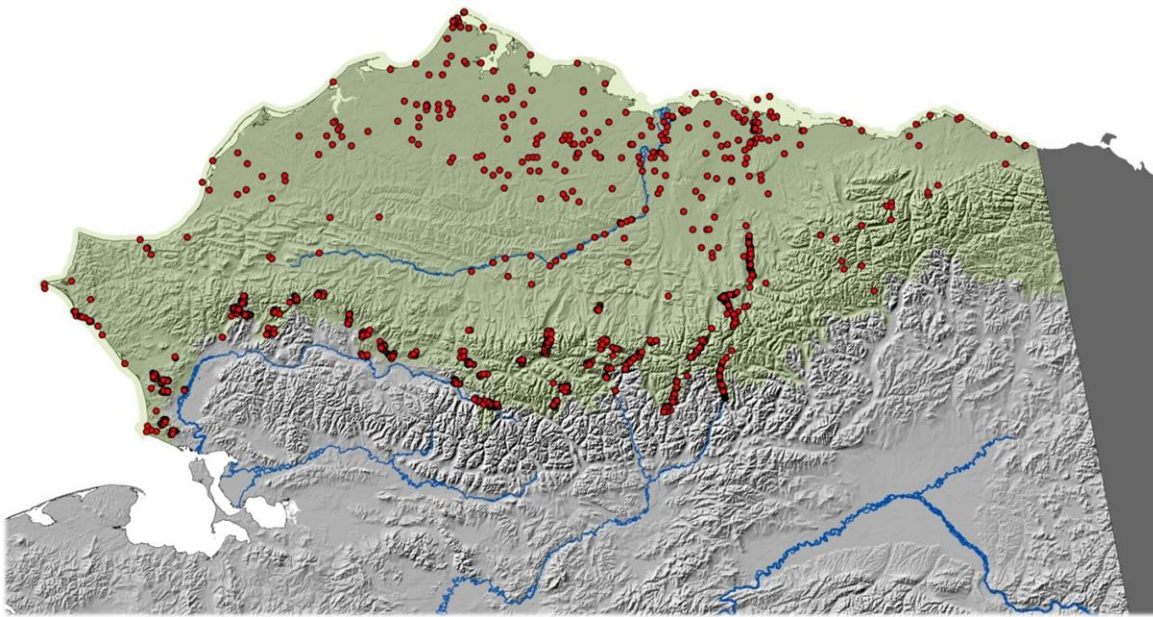


Figure 3. Map showing locations of documented occurrences for 59 passerine species from 41 independent surveys, spanning the period 1948 to 2009.

Aquatic Fine-Filter CEs

Five species were selected as Aquatic Fine-Filter CEs during Task 1. An effort was made to select representative species from different taxonomic groups (either family or sub-family). Datasets proposed for Aquatic Fine-Filter CEs and associated MQs are listed in Tables 15, 16, 17, 18, and 19 below.

The following MQs require data related to Aquatic Fine-Filter CEs:

AC 2. How does oil and gas infrastructure (e.g. roads, pads, pipeline), both permanent and temporary, affect fish habitat, fish distribution, and fish movements?

- This question requires data from Aquatic Coarse-Filter CEs, Aquatic Fine-Filter CEs, and Anthropogenic Uses.

AF 1. What are baseline characteristics and trends in fish habitat (lakes and streams), fish distribution, and fish movements?

- This question requires data from Aquatic Coarse-Filter CEs and Aquatic Fine-Filter CEs.

Table 15. Datasets for broad whitefish (*Coregonus nasus*).

Dataset Use	Dataset Name	Data source	Status
AF1, AC2, DM	Seasonal movements and habitat use by broad whitefish in the Teshepuk lake region of the National Petroleum Reserve-Alaska, 2003-2005	ADNR	To be requested
AF1, DM	Fish utilization of lakes in eastern NPRT-A: 1999-2001	MJM Research	To be requested
AF1, AC2, DM	Fish sampling of tundra streams and lakes in the Kuparuk River and Mine Point units, North Slope oil fields, Alaska. 2006-2007	ADNR	To be requested
AF1, AC2, DM	Seasonal movements and habitat use of arctic grayling, burbot , and broad whitefish within the fish creek drainage of the national petroleum reserve-Alaska, 2001-2002	ADNR	To be requested
DM	ADF&G Anadromous Waters Catalog: Species and Life Stages	ADF&G	Obtained
DM	ADF&G Alaska Freshwater Fish Inventory Points	ADF&G	Obtained
DM	2008 Harvest data for Elsoon Lagoon	North Slope Borough	Obtained
DM	Fish sampling of tundra streams and lakes in the Kuparuk River and Mine Point units, North Slope oil fields, Alaska. 2006-2007	ADF&G	To be requested
AF1, DM	Lake survey/species richness	UAF-Trevor Haynes	Requested

Table 16. Datasets for Dolly Varden (*Salvelinus malma*).

Dataset Use	Dataset Name	Data source	Status
AF1, DM	Movements of Post smolt Anadromous Dolly Varden in Northwestern Alaska	ADF&G	Obtained
AF1, AC2, DM	Fish utilization of lakes in eastern NPRT-A: 1999-2001	MJM Research	To be requested

Dataset Use	Dataset Name	Data source	Status
AF1, DM	Eastern North Slope Dolly Varden Stock Assessment	ADF&G	Obtained
DM	Assessment of Dolly Varden Spawning Population in Kagvik Creek, Alaska Final	USFWS	To be requested
DM	ADF&G Anadromous Waters Catalog: Species and Life Stages	ADF&G	Obtained
DM	ADF&G Alaska Freshwater Fish Inventory Points	ADF&G	Obtained
AF2, DM	Subsistence Use and Knowledge of Salmon in Barrow and Nuiqsut, Alaska	UAF, BLM	Obtained
DM	Fish sampling of tundra streams and lakes in the Kuparuk River and Mine Point units, North Slope oil fields, Alaska. 2006 AND 2007	ADNR	To be requested
DM	Eastern North Slope Dolly Varden Stock Assessment	ADF&G	Requested
DM	Arctic National Wildlife Refuge-Dolly Varden surveys: rearing, coastal feeding, and migration areas	USFWS	To be requested
AF1, DM	Dolly Varden population genetic studies	USFWS	Requested-available February 2014

Dolly Varden data gaps: North and central part of study area.

Table 17. Datasets for Arctic grayling (*Thymallus arcticus*).

Dataset Use	Dataset Name	Data source	Status
AF1, AC2, DM	Seasonal movements of Arctic grayling in a small beaded stream in the National Petroleum Reserve-Alaska.	UAF	Requested
DM	Climate change, hydrology, and Arctic grayling in the Kuparuk River	USFWS	To be requested
AF1, AC2, DM	Fish utilization of lakes in eastern NPRT-A: 1999-2001	MJM Research	To be requested
AF1, AC2, DM	Fish sampling of tundra streams and lakes in the Kuparuk River and Mine Point units, North Slope oil fields, Alaska. 2006 - 2007	ADNR	To be requested

Dataset Use	Dataset Name	Data source	Status
AF1, AC2, DM	Seasonal movements and habitat use of arctic grayling, burbot , and broad whitefish within the fish creek drainage of the national petroleum reserve-Alaska, 2001-2002	ADNR	To be requested
DM	Fish sampling of tundra streams and lakes in the Kuparuk River and Mine Point units, North Slope oil fields, Alaska. 2006-2007	ADNR	To be requested
DM	Arctic National Wildlife Refuge-Arctic grayling surveys: spawning, rearing, and migration areas	USFWS	To be requested

Arctic grayling data gaps: AWC does not have data for Arctic grayling. There are no trend or temporal studies data (i.e., mark-recapture, radio-telemetry). In general, the north and western NOS study area are considered data gaps

Table 18. Datasets for burbot (*Lota lota*).

Dataset Use	Dataset Name	Data source	Status
AF1, AC2, DM	Seasonal movements and habitat use of arctic grayling, burbot , and broad whitefish within the fish creek drainage of the national petroleum reserve-Alaska, 2001-2002	ADNR	To be requested
AF1, AC2, DM	Fish utilization of lakes in eastern NPRT-A: 1999-2001	MJM Research	To be requested
AF1, DM	Grayling and burbot population studies	USFWS	To be requested

Burbot Data Gaps: There is limited data on burbot distribution. Burbot not covered in the AWC and few other studies/datasets have been identified.

Table 19. Datasets for chum salmon (*Oncorhynchus keta*).

Dataset Use	Dataset Name	Data source	Status
AF1, AC2, DM	Fish utilization of lakes in eastern NPRT-A: 1999-2001	MJM Research	To be requested
AF1, AC2, DM	Fish sampling of tundra streams and lakes in the Kuparuk River and Mine Point units, North Slope oil fields, Alaska. 2006 - 2007	ADNR	To be requested
DM	ADF&G Anadromous Waters Catalog: Species and Life Stages	ADF&G	Obtained

Dataset Use	Dataset Name	Data source	Status
AF1, DM	Subsistence harvest of salmon on the North Slope	ADF&G, UAF	Requested
DM	2008 Harvest data for Elsoon Lagoon	North Slope Borough	Obtained
DM	Subsistence Use and Knowledge of Salmon in Barrow and Nuiqsut, Alaska	UAF, BLM	Obtained

Chum salmon data gaps: There is very limited data on chum salmon distribution. No data on chum salmon migration routes is available. There is also no trend or temporal studies data (i.e., mark-recapture, radio-telemetry).

Change Agents

CAs are those features or phenomena that have the potential to affect the size, condition, and landscape context of CEs. CAs include broad factors that have region-wide impacts such as wildfire, invasive species, climate change, and pollution, as well as localized impacts such as development, infrastructure, and extractive energy development. Five broadly organized change agents were selected for this assessment.

Climate Change

Climate change drives multiple types of change in the REA and is also part of feedback loops with other CAs (such as fire) and CEs (such as all Terrestrial Coarse-Filter CEs). Climate change will be assessed using downscaled global climate models from SNAP, with subsets of the available data selected based on the needs of the project.

The following MQs require data related to climate change:

TC 3: How will changes in precipitation, evapotranspiration, and active layer depth alter summer surface water availability in shallow-water and mesic/wet tundra habitats and how reliable are these projections?

- This question requires data from Terrestrial Coarse-Filter CEs, Climate Change (precipitation, potential evapotranspiration), and Permafrost (active layer thickness). It also requires an algorithm for linking abiotic variables with shallow-water and mesic-wet tundra. Currently, such an algorithm is a potential data gap.

TC 5. How is climate change affecting the timing of snow melt and snow onset, spring breakup and green-up, and growing season length?

- This question requires data from Climate Change.

Table 20. Datasets for Climate Change.

Dataset Use	Dataset Name	Data source	Status
DM	SNAP (PRISM) baseline temperature data, 1971-2000, 771m resolution	SNAP/PRISM	Obtained
TC3, DM	SNAP (PRISM) baseline precipitation data, 1971-2000, 771m resolution	SNAP/PRISM	Obtained
TC3, DM	SNAP monthly precipitation projections, CMIP3/AR4, A2 emissions scenario, 5-model average, 771m resolution, decadal means, 2010s, 2020s, 2050s, 2060s.	SNAP	Obtained
DM	SNAP monthly temperature projections, CMIP3/AR4, A2 emissions scenario, 5-model average, 771m resolution, decadal means, 2010s, 2020s, 2050s, 2060s.	SNAP	Obtained
TC5, DM	SNAP date of thaw (DOT) projections, CMIP3/AR4, A2 emissions scenario, 5-model average, 771m resolution, decadal means, 2010s, 2020s, 2050s, 2060s.	SNAP	Obtained
TC5, DM	SNAP date of freeze (DOF) projections, CMIP3/AR4, A2 emissions scenario, 5-model average, 771m resolution, decadal means, 2010s, 2020s, 2050s, 2060s.	SNAP	Obtained
TC5, DM	SNAP length of growing season (LOGS) projections, CMIP3/AR4, A2 emissions scenario, 5-model average, 771m resolution, decadal means, 2010s, 2020s, 2050s, 2060s.	SNAP	Obtained
TC3, DM	SNAP monthly potential evapotranspiration (PET) projections, CMIP3/AR4, A2 emissions scenario, 5-model average, 771m resolution, decadal means, 2010s, 2020s, 2050s, 2060s.	SNAP	Obtained
DM	SNAP monthly snow day fraction projections, CMIP3/AR4, A2 emissions scenario, single-model outputs for five models, 771m resolution, decadal means, 2010s, 2020s, 2050s, 2060s.	SNAP	Obtained

Additionally, Cliomes modelling will be used to assess potential shifts in suitable conditions for Terrestrial Coarse-Filter CEs:

TC 2. What are the changes in habitat and vegetation related to changing permafrost conditions, and what will these changes mean to wildlife and habitats?

- This question requires data from Terrestrial Coarse-Filter CEs, Climate Change (cliomes), and Permafrost (active layer thickness, mean annual ground temperature). A literature review

will be conducted to link permafrost thaw to impacts to CEs. Currently, these linkages are a potential data gap.

Table 21. Datasets for Cliomes.

Dataset Use	Dataset Name	Data source	Status
TC2, DM	18-cluster data, 2km resolution, based on SNAP monthly temperature and precipitation data	SNAP	Obtained

Permafrost

Permafrost is included as a Terrestrial Coarse-Filter CE but will be analyzed as a CA against the other Terrestrial Coarse-Filter CEs. Permafrost modeling will incorporate both SNAP climate projections and the Geophysical Institute Permafrost Lab (GIPL) permafrost model for Alaska, which relies on spatial data related to soil, vegetation, and climate.

The following MQs require data related to Permafrost:

TC 2. What are the changes in habitat and vegetation related to changing permafrost conditions, and what will these changes mean to wildlife and habitats?

- This question requires data from Terrestrial Coarse-Filter CEs, Climate Change (cliomes), and Permafrost (active layer thickness, mean annual ground temperature). A literature review will be conducted to link permafrost thaw to impacts to CEs. Currently, these linkages are a potential data gap.

TC 3. How will changes in precipitation, evapotranspiration, and active layer depth alter summer surface water availability in shallow-water and mesic/wet tundra habitats and how reliable are these projections?

- This question requires data from Terrestrial Coarse-Filter CEs, Climate Change (precipitation, potential evapotranspiration), and Permafrost (active layer thickness). It also requires an algorithm for linking abiotic variables with shallow-water and mesic-wet tundra. Currently, such an algorithm is a potential data gap.

AB 2. How will permafrost change spatially and temporally over the next two decades?

- This question requires data for active layer thickness and mean annual ground temperature.

Table 22. Datasets for Permafrost.

Dataset Use	Dataset Name	Data source	Status
TC2, AB2, DM	GIPL model outputs for mean annual ground temperature at one meter depth (MAGT) based on GIPL core model and SNAP monthly temperature projections, CMIP3/AR4, A2 emissions scenario, 5-model average, 771m	SNAP/GIPL	Obtained

	resolution, decadal means, 2010s, 2020s, 2050s, 2060s.		
TC2, TC3, AB2, DM	GIPL model outputs for active layer thickness (ALT) based on GIPL core model and SNAP monthly temperature projections, CMIP3/AR4, A2 emissions scenario, 5-model average, 771m resolution, decadal means, 2010s, 2020s, 2050s, 2060s.	SNAP/GIPL	Obtained

Fire

Climate projections (as described above), past fire history, and current vegetation patterns will be used in part to model patterns of fire frequency across the landscape.

The following MQs require data related to fire:

AB 1. Is the fire regime changing on the North Slope and what is the likely future fire regime (or range of regimes) based on climate projections and current knowledge of the relationships between climate and fire?

- This question requires data from ALFRESCO fire frequency outputs.

TF 2. What are caribou preferences for vegetation communities? Where do these vegetation communities exist?

- This question requires data for Terrestrial Coarse-Filter CEs, Terrestrial Fine-Filter CEs, and Fire. Lichen, preferred forage for caribou, takes many years to regenerate after a fire; therefore, fire scars and fire frequency are important considerations in mapping caribou habitat preferences.

Table 23. Datasets for Fire.

Dataset Use	Dataset Name	Data source	Status
AB1, DM	Stochastic ALFRESCO model runs, mean of five separate models and 100+ runs, based on SNAP climate projections; vegetation outputs	SNAP/ALFRESCO	Require project-specific calibration
AB1, DM	Stochastic ALFRESCO model runs, mean of five separate models and 100+ runs, based on SNAP climate projections; fire frequency outputs	SNAP/ALFRESCO	Require project-specific calibration
TF 2	BLM Fire Scar Map	BLM	Obtained

Invasive Species

AKNHP maintains a database of invasive plant species information for the state that will inform the analysis of invasive species as a CA.

No MQs relate to Invasive Species.

Table 24. Datasets for Invasive Species.

Dataset Use	Dataset Name	Data source	Status
DM	Alaska Exotic Plants Information Clearinghouse (AKEPIC)	AKNHP	Obtained

Anthropogenic Uses

Human use of land and other resources for purposes of development, subsistence, and other human needs are termed anthropogenic uses. Such uses can directly affect habitats as well as species. In addition to direct habitat conversion and fragmentation, anthropogenic uses can affect density of prey, which can impact subsistence hunting.

Data for some social and economic indicators is not always available. For example, there is no data source for self-employed fishermen, which make up a large share of local workers. Employment data from the Department of Labor only include wage earners. Other data, such as subsistence harvests, only cover a subset of all the communities within the study area boundaries.

The following MQs require data related to Anthropogenic Uses:

AC 1. How does water withdrawal from lakes for oil and gas activities (year-round industrial and domestic use and winter operations) affect lake water quantity and water quality, outflow/stream connectivity, and down-basin stream habitat?

- This question requires data from Aquatic Coarse-Filter CEs and Anthropogenic Uses. Assessment of water quality is a potential data gap. Additionally, modeling outflow/stream connectivity may not be possible due to lack of data.

AC 2. How does oil and gas infrastructure (e.g. roads, pads, pipeline), both permanent and temporary, affect fish habitat, fish distribution, and fish movements?

- This question requires data from Aquatic Coarse-Filter CEs, Aquatic Fine-Filter CEs, and Anthropogenic Uses.

TC 1. What are the impacts of oil/gas development (i.e. gravel pad and road construction; pipeline construction) on vegetation and hydrology? (Known impacts include burial, dust, saline runoff and altered soil moisture.)

- This question requires data from Terrestrial Coarse-Filter CEs and Anthropogenic Uses.

AP 1. What physical and perceptual limitations to access to subsistence resources by local residents are caused by oil/gas activities?

- This question requires data from Anthropogenic Uses. Perceptual limitations may have been recorded in numerous scattered reports compiled by various agencies over the years. Compiling this information, which is often referred to as Traditional Ecological Knowledge (TEK) from these sources may be beyond the scope of this project.

TF 3. What are the measurable and perceived impacts of development on subsistence harvest of caribou?

- This question requires data for Terrestrial Fine-Filter CEs and Anthropogenic Uses. Perceived impacts may be recorded in numerous scattered reports compiled by various agencies over the years. Compiling this information, which is often referred to as Traditional Ecological Knowledge (TEK), from these sources may be beyond the scope of this project.

AT 1. What parameters can help measure impacts from anthropogenic activities independently of natural cycles and vice versa?

- This question may not lend itself to statistical or spatial analysis. A literature review will help identify the right methods and will lead to identification of appropriate datasets.

AT 2. What potential impacts will oil/gas exploration and development have on CE habitat?

- This question requires data from Terrestrial Coarse-Filter CEs and Anthropogenic Uses.

AT 3. What additional contaminants baseline data are needed for fish, birds, marine, and terrestrial species, particularly those that affect the health and safety of subsistence foods?

- This question may not lend itself to statistical or spatial analysis. A literature review will help identify the right methods and will lead to identification of appropriate datasets.

AF 2. What are the measurable and perceived impacts of development on subsistence harvest of fish?

- This question requires data from Aquatic Coarse-Filter CEs and Anthropogenic Uses. Perceived impacts may be recorded in numerous scattered reports compiled by various agencies over the years. Compiling this information, which is often referred to as Traditional Ecological Knowledge (TEK), from these sources may be beyond the scope of this project.

Table 25. Datasets for Anthropogenic Uses.

Dataset Use	Dataset Name	Data source	Status
All MQs, DM	TIGER Files – Communities/places and boroughs	Decennial Census, US Census Bureau	Obtained
AT1	Demographic and employment data; employment by industry;	AK Department of Labor	Obtained
AT1	Cost of living differentials – computed relative to cost of living in Anchorage	McDowell Group	Obtained
AC1, DM	Industrial locations – fish processing plants, landfills, sawmills	Alaska Energy Authority	Obtained
AC1, DM	Locations of energy infrastructure – generation and transmission; potential renewable energy resources	Alaska Energy Authority	Obtained

Dataset Use	Dataset Name	Data source	Status
AT1	Economic indicators, education indicators, vital statistics	American Community Survey, US Census Bureau	Obtained
AT3, DM	Contaminated Sites	Alaska Department of Environmental Conservation; USGS	To be obtained
AC1, AC2, DM	Transportation Corridors – roads, trails, rivers	Alaska DOT	Obtained
AT1 TF3, DM	Communication infrastructure – telephone lines	USGS	Obtained
AC1, AC2, DM	Airports	FAA	Obtained
AC1 AT2 AF2 AP1	Land status – ownership, regulatory authority, conveyance status, etc.	Bureau of Land Management	Obtained
TF3, AP1, AF2, DM	Subsistence Harvest data; Commercial fishing harvest data; hunting maps and area information; sport fishing	AK Department of Fish and Game	Obtained
TF3, DM	Mining data – prospects, claims, mines	ARDF – USGS; BLM; AK DNR	Obtained
AC1	Water Permit Data	AK DNR	To be obtained
AC1	Water bodies and other geographic feature data	USGS	Obtained
AC1	Water quality standards	AK DNR	To be obtained
AC1, AC2, TC1, AP1, AT2, DM	Oil and Gas infrastructure	North Slope Borough Planning Department	To be obtained

Non-Spatial Management Questions

MQs that will not be addressed in a geospatial context are listed below. These MQs will only be addressed via literature review and data mining.

AT 1. What parameters can help measure impacts from anthropogenic activities independently of natural cycles and vice versa?

- This question may not lend itself to statistical or spatial analysis. A literature review will help identify the right methods and will lead to identification of appropriate datasets.

AT 3. What additional contaminants baseline data are needed for fish, birds, marine and terrestrial species, particularly those that affect the health and safety of subsistence foods?

- This question may not lend itself to statistical or spatial analysis. A literature review will help identify the right methods and will lead to identification of appropriate datasets.

AP 2. How are oil, gas, and mineral development on the North Slope impacting near- and far-field air quality, with particular emphasis on communities and “sensitive class 2” areas such as ANWR, Gates, Noatak?

- This question will be answered by a conceptual model and accompanying description of key variables influencing air quality on the North Slope and an Access database of currently available datasets related to air quality.
- AKNHP staff are working with BLM air quality specialist David Maxwell at the NOC to obtain pertinent data sources to best address this MQ. To date, data can be classified into three general categories: spatial data sources, existing models, and reports.

Appendix: Data Discovery Table by MQs and CEs/CAs

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Terrestrial Fine-Filter	Alaska Natural Heritage Program vertebrate polygon range maps- gyrfalcon	This dataset contains individual bird and mammal species range polygon shapefiles, compiled by the Alaska Natural Heritage Program. Whenever possible, shapefiles indicate seasonal occurrence (e.g. breeding, wintering, spring/fall migration).	Polygon	Current	Raptor concentration areas	Alaska Natural Heritage Program
Terrestrial Fine-Filter	Alaska Natural Heritage Program vertebrate polygon range maps- rough-legged hawk	This dataset contains individual bird and mammal species range polygon shapefiles, compiled by the Alaska Natural Heritage Program. Whenever possible, shapefiles indicate seasonal occurrence (e.g. breeding, wintering, spring/fall migration).	Polygon	Current	Raptor concentration areas	Alaska Natural Heritage Program
Terrestrial Fine-Filter	Alaska Gap analysis terrestrial vertebrate occurrence database - peregrine falcon	This dataset contains point occurrence records for individual bird and mammal species acquired from numerous data sources for the Alaska Gap Analysis Project.	Point	Current	Raptor concentration areas	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Alaska Gap analysis terrestrial vertebrate occurrence database - gyrfalcon	This dataset contains point occurrence records for individual bird and mammal species acquired from numerous data sources for the Alaska Gap Analysis Project.	Point	Current	Raptor concentration areas	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Alaska Gap analysis terrestrial vertebrate occurrence database – rough-legged hawk	This dataset contains point occurrence records for individual bird and mammal species acquired from numerous data sources for the Alaska Gap Analysis Project.	Point	Current	Raptor concentration areas	Alaska Gap Analysis Project

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Terrestrial Fine-Filter	Gap analysis final distribution model for the Peregrine Falcon.	Gap distribution models represent the areas where species are predicted to occur based on habitat associations. Models have a 60 meter resolution and are delimited by Gap species ranges.	Raster	Current	Raptor concentration areas	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Gap analysis final distribution model for the rough-legged hawk.	Gap distribution models represent the areas where species are predicted to occur based on habitat associations. Models have a 60 meter resolution and are delimited by Gap species ranges.	Raster	Current	Raptor concentration areas	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Gap analysis final distribution model for the gyrfalcon.	Gap distribution models represent the areas where species are predicted to occur based on habitat associations. Models have a 60 meter resolution and are delimited by Gap species ranges.	Raster	Current	Raptor concentration areas	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Site occupancy of cliff nesting raptors in Arctic NWR	Documented site occupancy and productivity for Peregrine Falcons, Gyrfalcons, Golden Eagles, and Rough-legged Hawks along Refuge rivers and at bluffs on the coastal plain.		Current	Raptor concentration areas	USFWS
Terrestrial Fine-Filter	Peregrine falcon locations in NPR-A	Documented peregrine falcon occurrences as depicted in EIS map for NPR-A.		Current	Raptor concentration areas	BLM
Terrestrial Fine-Filter	Alaska Natural Heritage Program vertebrate polygon range maps- greater white-fronted goose	This dataset contains individual bird and mammal species range polygon shapefiles, compiled by the Alaska Natural Heritage Program. Whenever possible, shapefiles indicate seasonal occurrence (e.g. breeding, wintering, spring/fall migration).	Polygon	Current	Greater white-fronted goose	Alaska Natural Heritage Program

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Terrestrial Fine-Filter	Alaska Gap analysis terrestrial vertebrate occurrence database - greater white-fronted goose	This dataset contains point occurrence records for individual bird and mammal species acquired from numerous data sources for the Alaska Gap Analysis Project.	Point	Current	Greater white-fronted goose	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Gap analysis final distribution model for the greater white-fronted goose.	Gap distribution models represent the areas where species are predicted to occur based on habitat associations. Models have a 60 meter resolution and are delimited by Gap species ranges.	Raster	Current	Greater white-fronted goose	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Teshkepuk Lake molting geese survey	This survey monitors trends and distribution of geese within a core molting area in the NPRA. This survey, initiated in 1982 has demonstrated the international importance of a small portion of the NPRA to Pacific brant. The survey has also been used to identify significant shifts in distribution of four species of geese that molt on the ACP.		Current	Greater white-fronted goose	USFWS
Terrestrial Fine-Filter	Greater white-fronted goose estimated relative onshore density 2007-2010	Density of greater white-fronted goose as shown in EIS for NPR-A.			Greater white-fronted goose	USFWS
Terrestrial Fine-Filter	Greater white-fronted goose aerial surveys 1986 to present			Current	Greater white-fronted goose	USFWS

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Terrestrial Fine-Filter	Alaska Natural Heritage Program vertebrate polygon range maps- Lapland longspur	This dataset contains individual bird and mammal species range polygon shapefiles, compiled by the Alaska Natural Heritage Program. Whenever possible, shapefiles indicate seasonal occurrence (e.g. breeding, wintering, spring/fall migration).	Polygon	Current	Lapland longspur	Alaska Natural Heritage Program
Terrestrial Fine-Filter	Alaska Gap analysis terrestrial vertebrate occurrence database - Lapland longspur	This dataset contains point occurrence records for individual bird and mammal species acquired from numerous data sources for the Alaska Gap Analysis Project.	Point	Current	Lapland longspur	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Gap analysis final distribution model for the Lapland longspur.	Gap distribution models represent the areas where species are predicted to occur based on habitat associations. Models have a 60 meter resolution and are delimited by Gap species ranges.	Raster	Current	Lapland longspur	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Alaska Natural Heritage Program vertebrate polygon range maps- nearctic brown lemming	This dataset contains individual bird and mammal species range polygon shapefiles, compiled by the Alaska Natural Heritage Program. Whenever possible, shapefiles indicate seasonal occurrence (e.g. breeding, wintering, spring/fall migration).	Polygon	Current	Nearctic brown lemming	Alaska Natural Heritage Program
Terrestrial Fine-Filter	Alaska Gap analysis terrestrial vertebrate occurrence database - nearctic brown lemming	This dataset contains point occurrence records for individual bird and mammal species acquired from numerous data sources for the Alaska Gap Analysis Project.	Point	Current	Nearctic brown lemming	Alaska Gap Analysis Project

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Terrestrial Fine-Filter	Gap analysis final distribution model for the nearctic brown lemming.	Gap distribution models represent the areas where species are predicted to occur based on habitat associations. Models have a 60 meter resolution and are delimited by Gap species ranges.	Raster	Current	Nearctic brown lemming	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Alaska Natural Heritage Program vertebrate polygon range maps- willow ptarmigan	This dataset contains individual bird and mammal species range polygon shapefiles, compiled by the Alaska Natural Heritage Program. Whenever possible, shapefiles indicate seasonal occurrence (e.g. breeding, wintering, spring/fall migration).	Polygon	Current	Willow ptarmigan	Alaska Natural Heritage Program
Terrestrial Fine-Filter	Alaska Gap analysis terrestrial vertebrate occurrence database - willow ptarmigan	This dataset contains point occurrence records for individual bird and mammal species acquired from numerous data sources for the Alaska Gap Analysis Project.	Point	Current	Willow ptarmigan	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Gap analysis final distribution model for the willow ptarmigan.	Gap distribution models represent the areas where species are predicted to occur based on habitat associations. Models have a 60 meter resolution and are delimited by Gap species ranges.	Raster	Current	Willow ptarmigan	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Alaska Natural Heritage Program vertebrate polygon range maps- arctic fox	This dataset contains individual bird and mammal species range polygon shapefiles, compiled by the Alaska Natural Heritage Program. Whenever possible, shapefiles indicate seasonal occurrence (e.g. breeding, wintering, spring/fall migration).	Polygon	Current	Arctic fox	Alaska Natural Heritage Program

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Terrestrial Fine-Filter	Alaska Gap analysis terrestrial vertebrate occurrence database - arctic fox	This dataset contains point occurrence records for individual bird and mammal species acquired from numerous data sources for the Alaska Gap Analysis Project.	Point	Current	Arctic fox	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Fox control sites	Control of Arctic Foxes to decrease predation on breeding STEI and eggs/brood		Current	Arctic fox	USFWS
Terrestrial Fine-Filter	Fox den long term monitoring at Prudhoe Bay	From 2007 to 2009, researchers surveyed all known natural dens within 2 kilometers (1.2 miles) of the road system.		Current	Arctic fox	ABR
Terrestrial Fine-Filter	Arctic fox continuing studies	Estimate fox den density N of Teshekpuk Lake. Satellite track wintering fox collared in NPRA and Prudhoe Bay.		Current	Arctic fox	North Slope Borough
Terrestrial Fine-Filter	Winter movements of Arctic foxes in Northern Alaska measured by satellite telemetry	We studied winter movements of 37 arctic foxes (<i>Vulpes lagopus</i>) collared within a petroleum development area at Prudhoe Bay, Alaska (n = 20), and an undeveloped area in the National Petroleum Reserve-Alaska (NPR-A, n = 17) during the winters of 2004, 2005, and 2006 using satellite telemetry.		Current	Arctic fox	Audubon

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Terrestrial Fine-Filter	Important birds areas for the state of Alaska	Alaska's IBAs are part of a growing global network of designated IBAs, spanning 156 countries around the world and 26 countries in the Western Hemisphere alone. Because every IBA across the planet has been designated and ranked against the same criteria, we often refer to IBAs as a Global Currency for Conservation. Globally, thousands of IBAs and millions of acres of avian habitat have received recognition and better protection as a result of the IBA program. So far Audubon has identified and designated 145 IBAs in Alaska, the majority of which are ranked as globally significant.	Vector	Current		Audubon Alaska
Terrestrial Fine-Filter	Alaska Gap analysis terrestrial vertebrate occurrence database - passerines	This dataset contains point occurrence records for individual bird and mammal species acquired from numerous data sources for the Alaska Gap Analysis Project.	Point	Current	Passerines	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Alaska Natural Heritage Program vertebrate polygon range maps- caribou	This dataset contains individual bird and mammal species range polygon shapefiles, compiled by the Alaska Natural Heritage Program. Whenever possible, shapefiles indicate seasonal occurrence (e.g. breeding, wintering, spring/fall migration).	Vector	Current	Caribou	Alaska Natural Heritage Program

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Terrestrial Fine-Filter	Alaska Gap analysis terrestrial vertebrate occurrence database - caribou	This dataset contains point occurrence records for individual bird and mammal species acquired from numerous data sources for the Alaska Gap Analysis Project.	Point	Current	Caribou	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Gap analysis final distribution model for Caribou.	Gap distribution models represent the areas where species are predicted to occur based on habitat associations. Models have a 60 meter resolution and are delimited by Gap species ranges.	Raster	Current	Caribou	Alaska Gap Analysis Project
Terrestrial Fine-Filter	Satellite / radio collar data - western arctic herd	Location data from 1988 to present.		Current	Caribou	ADFG
Terrestrial Fine-Filter	Satellite / radio collar data - Teshekpuk Lake herd	Location data from 1990 to present		Current	Caribou	ADFG
Terrestrial Fine-Filter	Satellite / radio collar data - central arctic herd	Location data from 1986 to present		Current	Caribou	ADFG
Terrestrial Fine-Filter	Satellite / radio collar data - porcupine herd	Location data from 1979 to present		Current	Caribou	ADFG
Terrestrial Fine-Filter	Distribution and movement of the Teshekpuk Lake herd	We present 15 years of baseline data on the distribution and movements of 72 satellite-collared and 10 GPS-collared caribou from the Teshekpuk caribou herd (TCH) that have had little to no exposure to oil and gas activities		Current	Caribou	North Slope Borough
Terrestrial Fine-Filter	NPS Caribou Monitoring of western arctic herd	Monitoring of the Western Arctic Herd by NPS in cooperation with BLM and ADFG.		Current	Caribou	NPS

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Terrestrial Fine-Filter	ASDP Caribou Monitoring Program	This report addresses that stipulation by summarizing data from 2010 (as well as additional telemetry data from 2007–2009) on caribou distribution and movements in the area crossed by the Alpine pipeline corridor, which comprises three adjacent pipelines sharing the same support structure, between the Colville River delta and Kuparuk Central Processing Facility 2 (CPF-2). The data used in this report were collected in concert with surveys conducted for two larger projects under contract to ConocoPhillips Alaska, Inc. (CPAI): the Greater Kuparuk Area (GKA) mammal study (Lawhead and Prichard 2010c) and the Alpine Satellite Development Program (ASDP) caribou monitoring study (Lawhead et al., in prep.).		Current	Caribou	Conoco Phillips
Terrestrial Fine-Filter	Nuiqsut Caribou Subsistence Monitoring	ConocoPhillips (CPAI) was required in their CD4 permit from the North Slope Borough to monitor the impacts of CD4 and other Alpine satellite developments on Nuiqsut subsistence hunting and harvest activities.		Current	Caribou	Conoco Phillips
Terrestrial Fine-Filter	Caribou Demography, Distribution and Movements in Relation to Oil Field Infrastructure	This study intends to model, using real data from caribou ranging through oil fields, the effects of oil field infrastructure on caribou productivity.		Current	Caribou	North Slope Borough

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Terrestrial Fine-Filter	Western arctic caribou seasonal range	Seasonal usage polygons and telemetry data for the Western Arctic Caribou Herd (WACH), including winter, migration, calving, summer, and peripheral ranges.	Vector	Current	Caribou	Alaska Department of Fish and Game
Terrestrial Fine-Filter	Seasonal range polygons of all caribou herds in Alaska	This dataset provides a statewide perspective on location of recognized caribou herds in Alaska based on an inclusive composite of telemetry data, survey observations, and local knowledge. The data set describes the extent of seasonal and total range for 33 caribou herds in Alaska.	Vector	Current	Caribou	Alaska Department of Fish and Game
Terrestrial Fine-Filter	Western Arctic caribou herd seasonal ranges and fire perimeters	Burn perimeters within caribou seasonal ranges and acreage within Kobuk-Seward Peninsula RMP planning area.	Report	Current	Caribou	BLM
Terrestrial Fine-Filter	Western Arctic caribou herd migration routes	Western Arctic caribou fall migration routes collected by ADF&G from satellite collars from 1987-2004.	Report	Near-Term	Caribou	BLM
Terrestrial Fine-Filter	Western Arctic caribou herd spring migration routes	Western Arctic caribou herd spring (April 1 to June 3) migration routes from data collected from Aug 1998 to Aug 2007.	Report	Near-Term	Caribou	Alaska Department of Fish and Game?
Terrestrial Fine-Filter	Western Arctic caribou herd winter range	Western Arctic caribou winter (Nov 1- March 31) range from data collected from Aug 1998- Aug 2007.	Report	Near-Term	Caribou	Alaska Department of Fish and Game?

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Terrestrial Fine-Filter	Western Arctic caribou herd calving grounds	Western Arctic caribou herd calving ground (June 4- 20) created from kernel analysis of satellite collar locations from August 1988 through August 2007. Data from the Alaska Department of Fish and Game.	Report	Near-Term	Caribou	Alaska Department of Fish and Game?
Terrestrial Fine-Filter	Winter kernel range of the Western Arctic caribou Herd	Winter of 2010 to 2011 and 2011 to 2012 kernel range polygons for the Western Arctic Caribou Herd.	Vector	Near-Term	Caribou	National Park Service

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Terrestrial Coarse-Filter	NSSI Landcover Map	<p>The North Slope Science Initiative (NSSI) identified an updated, consistent and accurate land cover data set as a primary base layer requirement for its long-term science and planning activities on the North Slope. This map is the outcome of a multi-year project to produce a moderate resolution land cover base layer to meet NSSI requirements. New Landsat Thematic Mapper (TM) 30 meter resolution landcover maps were produced for the far western arctic, and for the area between the National Petroleum Reserve - Alaska (NPRA) and Arctic National Wildlife Refuge. In the NPRA, an existing land cover map from the 1990's was "crosswalked" to the NSSI land cover map classes, and a large portion of the map was updated using more recently acquired Landsat TM images. The remaining areas of the NSSI land cover map utilized an existing statewide land cover mosaic compiled by the Alaska Natural Heritage Program (AKNHP) that consisted of land cover classes that already matched the NSSI land cover classes and originated primarily from National Park Service (NPS) and U.S. Fish and Wildlife (FWS) land cover maps. Twenty four classes are identified in the map, covering approximately 60 million acres (24.3 million hectares) stretching from the border of Canada to the western arctic coast and from the Arctic Ocean south to the Brooks</p>	Raster	Current	All Terrestrial Coarse Filter CEs	Ducks Unlimited

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Invasive Species	AKEPIC - Alaska Exotic Plants Information Clearinghouse	AKNHP maintains an updated georeferenced non-native plant database for the state. Roughly 100,000 collection points for 150 or so species, including all the potentially relevant non-native species in the REA.	Vector	Current	CA: Invasive Species	AKNHP
Climate Change	Alaska Projected Decadal Averages of Monthly Snow-day Fraction 771 m CMIP3/AR4	These snow-day fraction estimates were produced by applying equations relating decadal average monthly temperature to snow-day fraction to downscaled decadal average monthly temperature. .	Raster	Long-Term		SNAP
Climate Change	Projected Monthly Precipitation 771 m CMIP3/AR4 2001-2100	Includes downscaled projections of monthly total precipitation for each month of every year from January 2001 - December 2100 at 771x771 meter spatial resolution.	Raster	Long-Term		SNAP
Climate Change	Projected Decadal Averages of Monthly Total Precipitation 771m CMIP3/AR4	includes downscaled projections of decadal means of monthly total precipitation (in millimeters) for each month of every decade from 2010-2100 at 771x771 m spatial resolution.	Raster	Long-Term		SNAP
Climate Change	Projected Decadal Averages of Annual Total Precipitation 771m AR4 2001-2100	Includes downscaled projections of decadal means of annual total precipitation (in millimeters) for each decade from 2001-2100 at 771x771 m spatial resolution. Each file represents a decadal mean of an annual total calculated from monthly totals.	Raster	Long-Term	Management Questions 27 and 28	SNAP

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Climate Change	Projected Decadal Averages of Seasonal Total Precipitation 771m AR4 2001-2100	Includes downscaled projections of decadal means of seasonal total precipitation (in millimeters) for each season of every decade from 2001-2100 at 771x771 meter spatial resolution. Each file represents a mean seasonal total in a given decade.	Raster	Long-Term		SNAP
Climate Change	Projected Monthly Total Precipitation 2km AR4 2001-2100	Includes downscaled projections of monthly total precipitation (in millimeters) for each month of every year from January 2001-December 2100 at 2x2 kilometer spatial resolution. Each file represents a single month in a given year.	Raster	Long-Term		SNAP
Climate Change	Projected Decadal Averages of Annual Total Precipitation 2km AR4 2001-2100	Includes downscaled projections of decadal means of annual total precipitation (in millimeters) for each decade from 2010 - 2100 (see exceptions below) at 2x2 kilometer spatial resolution.	Raster	Long-Term		SNAP
Climate Change	Projected Decadal Averages of Seasonal Total Precipitation 2km AR4 2001-2100	includes downscaled projections of decadal means of seasonal total precipitation (in millimeters) for each season of every decade from 2010-2100.	Raster	Long-Term		SNAP
Climate Change	Historical Decadal Averages of Monthly Total Precipitation 771 m CRU TS 3.0	Historical (1910–1999) derived precipitation products from CRUTS 3.0 climate data, downscaled to 771m via the delta method.	Raster	Historic		SNAP

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Climate Change	Historical Decadal Averages of Annual Total Precipitation 771 m CRU TS 3.0 1910-1999	Historical (1910–1999) derived precipitation products from CRUTS 3.0 climate data, downscaled to 771m via the delta method.	Raster	Historic		SNAP
Climate Change	Historical Decadal Averages of Seasonal Total Precipitation 771 m CRU TS 3.0 1910-1999	Historical (1910–1999) derived precipitation products from CRUTS 3.0 climate data, downscaled to 771m via the delta method.	Raster	Historic		SNAP
Climate Change	Historical Monthly Total Precipitation 771m CRU TS 3.0	This set of files includes downscaled historical estimates of monthly total precipitation (in millimeters) for each month of every year from January 1901-December 2006.	Raster	Historic		SNAP
Climate Change	Historical Monthly Precipitation 771m CRU TS 3.1/3.1.01	Historical (1901–2009) monthly total precipitation from CRU TS 3.1.01 climate data, downscaled to 771m via the delta method.	Raster	Historic		SNAP
Climate Change	Historical Monthly Total Precipitation 2km CRU TS 3.0 1901-2009	This set of files includes downscaled historical estimates of monthly total precipitation (in millimeters) for each month of every year from January 1901 - December 2006.	Raster	Historic		SNAP
Climate Change	Historical Monthly Total Precipitation 2km CRUTS 3.1.01 1901-2009	This set of files includes downscaled historical estimates of monthly total precipitation (in millimeters) for each month of every year from January 1901 - December 2006 (CRU TS 3.0) or 2009 (CRU TS 3.1.01) at 2x2 kilometer spatial resolution.	Raster	Historic		SNAP

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Climate Change	Historical decadal averages of Monthly Total Precipitation 2 km CRU TS 3.0	This set of files includes downscaled historical estimates of decadal means of monthly total precipitation (in millimeters) for each month of every decade from 1910-2006 at a 2x2 km spatial resolution.	Raster	Historic		SNAP
Climate Change	Historical Decadal Averages of Annual Total Precipitation 2 km CRU TS 3.0	This set of files includes downscaled historical estimates of decadal means of annual total precipitation (in millimeters) for each decade from 1910 - 2006 (CRU TS 3.0) or 2009 (CRU TS 3.1.01) at 2x2 kilometer spatial resolution.	Raster	Historic		SNAP
Climate Change	Historical Decadal Averages of Seasonal Total Precipitation 2km CRUTS3.0 1910-2009	This set of files includes downscaled historical estimates of decadal means of seasonal total precipitation (in millimeters) for each season of every decade from 1910 - 2006 (CRU TS 3.0) or 2009 (CRU TS 3.1.01) at 2x2 kilometer spatial resolution.	Raster	Historic		SNAP
Climate Change	Historical Decadal Averages of Monthly Total Precipitation 2km CRUTS3.1.01 1910-2009	Includes downscaled historical estimates of decadal means of monthly total precipitation (in millimeters) for each month of every decade from 1910 - 2006 (CRU TS 3.0) or 2009 (CRU TS 3.1.01) at 2x2 kilometer spatial resolution.	Raster	Historic	Management questions 27-28	SNAP

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Climate Change	Historical Decadal Averages of Annual Total Precipitation 2km CRUTS3.1.01 1910-2009	Includes downscaled historical estimates of decadal means of annual total precipitation (in millimeters) for each decade from 1910 - 2006 (CRU TS 3.0) or 2009 (CRU TS 3.1.01) at 2x2 kilometer spatial resolution.	Raster	Historic		SNAP
Climate Change	Historical Decadal Averages of Seasonal Total Precipitation 2km CRUTS3.1.01 1910-2009	Includes downscaled historical estimates of decadal means of seasonal total precipitation (in millimeters) or each season of every decade from 1910 - 2006 (CRU TS 3.0) or 2009 (CRU TS 3.1.01) at 2x2 kilometer spatial resolution.	Raster	Historic		SNAP
Climate Change	Historical Decadal Averages Of Monthly Snow-day Fraction 771m CRUTS3.1 1910-2009	These snow-day fraction estimates were produced by applying equations relating decadal average monthly temperature to snow-day fraction to downscaled decadal average monthly temperature.	Raster	Historic		SNAP
Climate Change	Projected Monthly Precipitation 771 m CMIP5/AR5 2006-2100	Projected monthly total precipitation from 5 AR4 GCMs that perform best across Alaska and the Arctic, downscaled to 771m via the delta method. A 5-Model Average is also included.	Raster	Long-Term		SNAP
Climate Change	Historical (1850-2005) monthly temperature data CMIP5/AR5	Historical (1850-2005) monthly average temperature 5 AR5 GCMs that perform best across Alaska and the Arctic, downscaled to 771m via the delta method.	Raster	Historic		SNAP

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Climate Change	Historical (1850-2005) Monthly Precipitation 2 KM CMIP5/AR5	Historical (1850-2005) Monthly Precipitation 2 KM CMIP5/AR5 downscaled using the delta method.	Raster	Historic		SNAP
Climate Change	Projected (2006-2100) Monthly Temperature 2 KM CMIP5/AR5	Projected (2006-2100) Monthly Temperature 2 KM CMIP5/AR5 data downscaled using the delta method.	Raster	Long-Term		SNAP
Climate Change	Historical ALFRESCO Outputs (1901-2005)	1km resolution, annual outputs of historical (1901-2005) data. Variables include veg type, veg age, burned area, fire severity.	Raster	Historic		SNAP
Climate Change	Projected (2006-2100) ALFRESCO outputs	1km resolution, annual outputs of projected data (3 RCPs, 2006-2100) variables include veg type, veg age, burned area, fire severity	Raster	Long-Term		SNAP
Climate Change	Historical (1850-2005) Permafrost variables (AR5, 5 top models, 5 model average)	Permafrost variables: max active layer thickness, warming effect of snow against frost, snow depth, annual ground surface temp, ground temp at bottom of active layer, thermal offset between surface and bottom of active layer	Raster	Historic		SNAP
Climate Change	Projected permafrost variables (2006-2100) AR5, 5 top models, 5 model average	Permafrost variables: max active layer thickness, warming effect of snow against frost, snow depth, annual ground surface temp, ground temp at bottom of active layer, thermal offset between surface and bottom of active layer	Raster	Long-Term		SNAP

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Climate Change	Projected Day of Freeze or Thaw 2 KM CMIP5/AR5	Estimated Julian days of freeze and thaw (dof, dot) are calculated by assuming a linear change in temperature between consecutive months. Mean monthly temperatures are used to represent daily temperature on the 15th day of each month.	Raster	Long-Term		SNAP
Climate Change	Historical Day of Freeze or Thaw 2 KM CMIP5/AR5	Estimated Julian days of freeze and thaw (dof, dot) are calculated by assuming a linear change in temperature between consecutive months. Mean monthly temperatures are used to represent daily temperature on the 15th day of each month.	Raster	Historic		SNAP
Climate Change	Projected Day of Freeze or Thaw 771 m CMIP5/AR5 (2006-2100)	Estimated Julian days of freeze and thaw (dof, dot) are calculated by assuming a linear change in temperature between consecutive months. Mean monthly temperatures are used to represent daily temperature on the 15th day of each month.	Raster	Long-Term		SNAP
Climate Change	Historical Day of Freeze or Thaw 771 m CMIP5/AR5	Estimated Julian days of freeze and thaw (dof, dot) are calculated by assuming a linear change in temperature between consecutive months. Mean monthly temperatures are used to represent daily temperature on the 15th day of each month.	Raster	Historic		SNAP

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Climate Change	Historical Length of Growing Season (1850-2005) 2KM CMIP5/AR5	The length of growing season (logs) refers to the number of days between the days of freeze and thaw.	Raster	Historic		SNAP
Climate Change	Historical Length of Growing Season 771 m CMIP5/AR5 (1850-2005)	The length of growing season (logs) refers to the number of days between the days of freeze and thaw.	Raster	Historic		SNAP
Climate Change	Projected Length of Growing Season 771 m CMIP5/AR5 (2006-2100)	The length of growing season (logs) refers to the number of days between the days of freeze and thaw.	Raster	Long-Term		SNAP
Climate Change	Projected Length of Growing Season 2 KM CMIP5/AR5 (2006-2100)	The length of growing season (logs) refers to the number of days between the days of freeze and thaw.	Raster	Long-Term		SNAP
Climate Change	Projected Alaska Climate-Biome Shift 2 KM (2001-2099)	Projected shifts in statewide climate-biomes (cliomes) based on climate projections derived from the Random Forests model.	Raster	Long-Term		SNAP
Climate Change	Projected Monthly Temperature 771 m CMIP3 / AR4	Downscaled projections (B1, A1B and A2 scenarios) of monthly mean temperatures (Celsius) for each month of every year from Jan 2001 - Dec 2100 at 771x771 m spatial resolution in Alaska. Each file represents a single month in a given year.	Raster	Long-Term		SNAP

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Climate Change	Projected Decadal Averages of Monthly Mean Temperatures 771 AR4	Downscaled projections of decadal means of monthly mean temperatures (in degrees Celsius) for each month of every decade from 2010 - 2100 at 771x771 m spatial resolution in Alaska. Each file represents a mean monthly mean in a given decade.	Raster	Long-Term		SNAP
Climate Change	Projected Decadal Averages of Annual Mean Temperatures 771m AR4	Downscaled projections of decadal means of annual mean temperatures (in degrees Celsius) for each decade from 2010-2100 at 771x771 m spatial resolution in Alaska. Each file represents a decadal mean of an annual mean calculated from mean monthly data.	Raster	Long-Term		SNAP
Climate Change	Projected Decadal Averages of Seasonal Mean Temperatures 771m AR4	Downscaled projections of decadal means of seasonal mean temperatures (in degrees Celsius) for each season of every decade from 2010 - 2100 at 771x771 m spatial resolution in Alaska. Each file represents a seasonal mean in a given decade.	Raster	Long-Term		SNAP
Climate Change	Projected Day of Freeze 771 m AR4	Downscaled projections decadal means of annual of day of freeze for each decade from 2010-2100 at 771x771 m spatial resolution in Alaska. Each file represents a decadal mean of an annual mean calculated from mean monthly data.	Raster	Long-Term		SNAP

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Climate Change	Projected Day of Thaw 771 m AR4	Downscaled projections decadal means of annual of day of thaw for each decade from 2010-2100 at 771x771 m spatial resolution in Alaska. Each file represents a decadal mean of an annual mean calculated from mean monthly data.	Raster	Long-Term		SNAP
Climate Change	Projected Length of Growing Season 771 m AR4	Downscaled projections of decadal means of annual length of growing season (days) for each decade from 2010-2100 at 771x771 m spatial resolution in Alaska. Each file represents a decadal mean of an annual mean calculated from mean monthly data.	Raster	Long-Term		SNAP
Climate Change	Projected Monthly Potential Evapotranspiration 2 km CMIP3 / AR4	Downscaled projections of monthly total potential evapotranspiration (in millimeters) for each month of every year from Jan 2001 - Dec 2099 at 2x2 km spatial resolution in Alaska. Each file represents a single month in a given year.	Raster	Long-Term		SNAP
Climate Change	Projected Decadal Averages of Monthly Total Potential Evapotranspiration 2 km AR4	Downscaled projections of decadal means of monthly total potential evapotranspiration (millimeters) for each month of every decade from 2010-2099 at 2x2 km spatial resolution in Alaska. Each file represents a mean monthly total in a given decade.	Raster	Long-Term		SNAP

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Climate Change	Projected Decadal Averages of Annual Total Potential Evapotranspiration 2 km AR4	Downscaled projections of decadal means of annual total potential evapotranspiration (mm) for each decade from 2010-2099 at 2x2 km spatial resolution in Alaska. Each file represents a decadal mean of an annual total calculated from monthly totals.	Raster	Long-Term		SNAP
Climate Change	Projected Decadal Averages of Seasonal Total Potential Evapotranspiration 2 km AR4	Downscaled projections of decadal means of seasonal total potential evapotranspiration (mm) for each decade from 2010-2099 at 2x2 km spatial resolution in Alaska. Each file represents a mean seasonal total in a given decade.	Raster	Long-Term		SNAP
Climate Change	Historical Monthly Temperature 771 m CRU TS 3.0 / 3.1 / 3.1.01	Downscaled historical monthly mean temperatures (Celsius) for each month of every year from Jan 1901 - Dec 2006 (CRU TS 3.0) or 2009 (CRU TS 3.1) at 771x771 m spatial resolution in Alaska. Each file represents a single month in a given year.	Raster	Historic		SNAP
Climate Change	Historical Decadal Averages of Monthly Mean Temperatures 771 m CRU TS 3.0 / 3.1	Downscaled historical decadal means of monthly mean temperatures (C) for each month of every decade from 1910-2006 (CRU TS 3.0) or 2009 (CRU TS 3.1) at 771x771 m spatial resolution in Alaska. Each file represents a mean monthly mean in a given decade.	Raster	Historic		SNAP

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Climate Change	Historical Decadal Averages of Annual Mean Temperatures 771 m CRU TS 3.0 / 3.1	Downscaled historical decadal means of annual mean temps (C) for each decade from 1910-2006(CRU TS 3.0) or 2009(CRU TS 3.1) at 771x771 m spatial resolution in Alaska. Each file represents a decadal mean of an annual mean calculated from mean monthly data.	Raster	Historic		SNAP
Climate Change	Historical Decadal Averages of Seasonal Mean Temperatures 771 m CRU TS 3.0 / 3.1	Downscaled historical decadal means of seasonal mean temperatures (Celsius) for each season of every decade from 1910-2006 (CRU TS 3.0) or 2009 (CRU TS 3.1) at 771x771 m spatial resolution in Alaska. Each file represents a seasonal mean in a given decade.	Raster	Historic		SNAP
Climate Change	Historical Day of Freeze 771 m CRU TS 3.0 / 3.1	Downscaled historical decadal means of annual day of freeze for each decade from 1910-2006 (CRU TS 3.0) or 2009 (CRU TS 3.1) at 771x771m spatial resolution in Alaska. Each file represents a decadal mean of an annual mean calculated from mean monthly data.	Raster	Historic		SNAP

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Climate Change	Historical Day of Thaw 771 m CRU TS 3.0 / 3.1	Downscaled historical decadal means of annual day of thaw for each decade from 1910-2006 (CRU TS 3.0) or 2009 (CRU TS 3.1) at 771x771 m spatial resolution in Alaska. Each file represents a decadal mean of an annual mean calculated from mean monthly data.	Raster	Historic		SNAP
Climate Change	Historical Length of Growing Season 771 m CRU TS 3.0 / 3.1	Downscaled historical decadal means of annual length of growing season (days) for each decade from 1910-2006 (CRU TS 3.0) or 2009 (CRU TS 3.1) at 771x771 m resolution. Each file represents a decadal mean of an annual mean calculated from mean monthly data	Raster	Historic		SNAP
Climate Change	Historical Monthly Total Potential Evapotranspiration 2 km CRU TS 3.0	Downscaled historical monthly total potential evapotranspiration (mm) for each month of every year from January 1901 - December 2006 at 2x2 kilometer spatial resolution in Alaska. Each file represents a single month in a given year.	Raster	Historic		SNAP
Climate Change	Historical Decadal Averages of Monthly Total Potential Evapotranspiration 2 km CRU TS 3.0	Downscaled historical decadal means of monthly total potential evapotranspiration (mm) for each month of every decade from 1910-2006 at 2x2 kilometer spatial resolution in Alaska. Each file represents a mean monthly total in a given decade.	Raster	Historic		SNAP

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Climate Change	Historical Decadal Averages of Annual Total Potential Evapotranspiration 2 km CRU TS 3.0	Downscaled historical decadal means of annual total potential evapotranspiration (mm) for each decade from 1910-2006 at 2x2 kilometer spatial resolution in Alaska. Each file represents a decadal mean of an annual total calculated from monthly totals.	Raster	Historic		SNAP
Climate Change	Historical Decadal Averages of Seasonal Total Potential Evapotranspiration 2km CRUTS3.0	Downscaled historical decadal means of seasonal total potential evapotranspiration (mm) for each season of every decade from 1910-2006 at 2x2 kilometer spatial resolution in Alaska. Each file represents a mean seasonal total in a given decade.	Raster	Historic		SNAP
Aquatic Fine-Filter/ and Coarse-Filter	Fish sampling of tundra streams and lakes in the Kuparuk River and Mine Point units, North Slope oil fields, Alaska. 2006 AND 2007	Study to identify fish species and age classes using each in North Slope streams and lakes	Report		MQ_AF_1, All fine-filer and Coarse filter CEs	ADNR
Aquatic Fine-Filter	ADF&G Anadromous Waters Catalog: Species and Life Stages	This dataset has the same coverage as the Anadromous Waters Catalog, except that it has additional attribute fields identifying species and life stages for individual stream segments.	Vector		Chum salmon ; Broad whitefish and Dolly Varden	Alaska Department of Fish and Game (ADF&G)

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Aquatic Fine-Filter	ADF&G Alaska Freshwater Fish Inventory Points	This dataset contains survey locations from the Alaska Freshwater Fish Inventory Database (AFFID). The AFFID houses freshwater fish (both anadromous and resident) occurrence data compiled from a variety of sources, but mostly from ADF&G field work.	Vector		broad whitefish, Arctic grayling, Dolly Varden, burbot, chum salmon	Alaska Department of Fish and Game (ADF&G)
Aquatic Fine-Filter	Seasonal movements and habitat use of arctic grayling (<i>Thymallus arcticus</i>), burbot (<i>Lota Lota</i>), and broad whitefish (<i>Coregonus Nasus</i>) within the fish creek drainage of the national petroleum reserve-Alaska, 2001-2002	Seasonal movement patterns of fish and their habitat usage	Report		Broad whitefish, Arctic grayling, and burbot	ADNR
Aquatic Fine-Filter	ADF&G, UAF Subsistence Harvest of salmon on the North Slope	Spawning and presence data for Chum Salmon	Vector		Chum salmon	ADF&G; UAF
Aquatic Fine-Filter	USFWS Arctic National Wildlife Refuge-Arctic grayling surveys: spawning, rearing, and migration areas	Map of arctic grayling distribution within the Arctic National Wildlife Refuge			Arctic grayling distribution	USFWS

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Aquatic Fine-Filter	Seasonal movements of Arctic grayling in a small beaded stream in the National Petroleum Reserve-Alaska.	Mark Wipfli UAF graduate student studies			Arctic grayling distribution	UAF
Aquatic Fine-Filter	USFWS Arctic National Wildlife Refuge-Dolly Varden surveys: rearing, coastal feeding, and migration areas	Map of Dolly Varden distribution within the Arctic National Wildlife Refuge	Vector		Dolly Varden distribution	USFWS
Aquatic Fine-Filter	Movements of Post-smolt Anadromous Dolly Varden in Northwestern Alaska	Over 4000 DV were radio marked in NOS river drainages-Distribution and spawning habitat			Dolly Varden distribution	ADF&G - F. Decicco
Aquatic Fine-Filter	Climate change, hydrology, and Arctic grayling in the Kuparuk River	Small scale movements of Arctic grayling and hydrologic factors that affect stream discharge and Arctic grayling migration			Arctic grayling	USFWS
Aquatic Fine-Filter	Seasonal movements and habitat use by broad whitefish (Coregonus nasus) in the Teshekpuk lake region of the National Petroleum Reserve-Alaska, 2003-2005	Seasonal movement patterns of fish and their habitat usage	Report		MQ_AF_1, Broad whitefish	ADNR
Aquatic Fine-Filter	Eastern North Slope Dolly Varden Stock Assessment	Radio-telemetry surveys were conducted in conjunction with mark-recapture abundance estimates of overwintering Dolly Varden within the Ivishak River during 2001-2003	Report		Dolly Varden trend and movement data	ADF&G

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Aquatic Course-Filter	National Hydrography Dataset Waterbodies	The National Hydrography Dataset (NHD) is a feature-based database that interconnects and uniquely identifies the stream segments or reaches that make up the nation's surface water drainage system.	Vector		Deep and shallow connected lakes	USGS
Aquatic Course-Filter	National Hydrography Dataset Flowlines	The National Hydrography Dataset (NHD) is a feature-based database that interconnects and uniquely identifies the stream segments or reaches that make up the nation's surface water drainage system.	Vector		Stream network - headwater streams, lowland rivers, rivers, large and small streams	USGS
Aquatic Coarse-Filter/Climate Change	2009 SAR winter liquid water data for lakes on north slope coastal plain	2009 remote sensing data for deep connected lakes. Based on just one point in time, but 2009 was an exceptionally warm year so it could be worth including as current extreme.	Vector		Deep connected lakes; Climate Change CA	NFWF; NSSI; UAF;GINA

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Aquatic Coarse-Filter	National Petroleum Reserve – Alaska 2002 Lake Monitoring and Recharge Study	This report summarizes hydrologic observations and measurements made during a lake monitoring and recharge study conducted in and around the Alpine area in 2002 by Michael Baker Jr., Inc. (Baker). The study was performed at the request of ConocoPhillips Alaska (CPA). The study consisted of multi-season water surface elevation, depth, and ice thickness surveys; in situ physical and water quality parameter measurements; analytical water quality sampling and testing; and lake recharge observations at seven fresh water lakes.	Report		MQ_AC_1, Deep connected lakes	Michael J. Baker JR. Inc.
Aquatic Coarse-Filter	Survey of lakes in association with the 2005 NPRA ice road Final Data Report December 2004	Survey that updated lake bathymetry in previously surveyed lakes using new (post-2001) survey techniques, inventory fish species in lakes within the project study area that had previously not been surveyed, and measure water chemistry parameters to assess suitability of water for potential uses.	Report		MQ_AC2, MQ_AF_1/ Deep connected lakes	MJM Research

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Aquatic Coarse-Filter	Fish utilization of lakes in eastern NPRT-A: 1999-2001	Study documenting fish presence and habitat use in eastern NPR-A lakes. Selected lakes include those that may be used to support exploration. The area surveyed during 1999-2001 lies between the Nechelik Channel of the Colville River and the confluence of Fish and Judy creeks, then continues south along Judy Creek and west along upper Fish Creek	Report		MQ_AF_1, Deep connected lakes	MJM Research
Aquatic Coarse-Filter	A survey of stream crossing structures in the North Slope oilfields	Survey of structures to allow stream crossing and fish presence data	Report		MQ_AF_1, Large and small streams	ADNR
Aquatic Coarse-Filter	Survey of lakes in association with the 2005 NPRA ice road Final Data Report December 2004		Report		MQ_AF_1, Deep connected lakes	MJM Research
Aquatic Coarse-Filter	Lake stocking database	Online database with lake and fish species richness data	Vector		MQ_AF_1, Deep and shallow connected lakes	ADF&G
Aquatic Coarse-Filter	Lake surveys	PhD student project focused on surveying 88 lakes on North Slope	Vector		MQ_AF_1, Deep and shallow connected lakes	UAF-Trevor Haynes
Aquatic Coarse-Filter	Fish Creek Watershed-Lake Mapping	Fish Creek Watershed-Lake Mapping	Vector		MQ_AF_1, Deep and shallow connected lakes	BLM, USFWS, UAF, USGS
Aquatic Fine-Filter	Seasonal movements of Arctic grayling in a small beaded stream in the NPRA-Alaska	Master student project focused on Fish Creek Drainage	Vector		Arctic grayling	UAF-Kurt Heim

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
AF1, DM	Dolly Varden population genetic studies	Dolly Varden population genetic studies	Vector		Dolly Varden	USFWS
Anthropogenic uses	2008 Harvest data for Elsoon Lagoon	North Slope Borough Department of Wildlife Management study on gillnet subsistence fishery in Elson Lagoon	Point		Broad whitefish, chum salmon	Lawrence Moulton, MJM Research 907-852-0350.
Anthropogenic uses	Iñupiat Knowledge of Selected Subsistence Fish Near Barrow, Alaska	Ethnographic research focused on fish subsistence use in NOS communities to document current use and the perceptions of change related to development and climate and ecological change in the North Slope region.	Report		All CE fine-filter fish species	BLM, UAF, BOEM, CMI; Ristroph
Anthropogenic uses	Subsistence Use and Knowledge of Salmon in Barrow and Nuiqsut, Alaska	Ethnographic research focused on gaining information about salmon use, abundance, and distribution in the Arctic.	Report		MQ_AF_2, chum salmon	
Anthropogenic uses	Integrating Community Knowledge into Environmental and Natural Resource Decision-Making: Notes from Alaska and Around the World	This article provides recommendations for agencies to consider in collecting and using community ecological knowledge.	Report		MQ_AF_2	FWS
Anthropogenic uses	BLM subsistence harvest use areas	This dataset contains subsistence fish harvest range maps	Vector		All CE fine-filter fish species	BLM
Anthropogenic uses	NPRA Oil and gas infrastructure and development	This dataset contains line and polygon shapefiles, compiled by the BLM for oil and gas development within NPRA-winter exploration (Data are digitized from hardcopy reports)	Vector		MQ_AC_1, MQ_AF_2	BLM

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Anthropogenic uses	Alaska Stand-Alone Gas Pipeline EIS	Environmental Impact Statement for proposed high pressure natural gas pipeline that would run from the North Slope to Cook inlet	-		MQ_AC_2, MQ_AF_1	U.S. Army Corps of Engineers
Anthropogenic uses	Department of Labor and Workforce Development, Research and Analysis: Alaska Local and Regional Information: Worker characteristics	Department of Labor's Research and Analysis section created the Alaska Local and Regional Information (ALARI) database as a profile generator of different datasets. This particular dataset provides data about worker characteristics of a community. It includes a breakdown of the working population by age, sex, number employed, wage, and number of residents.	table	current & historic		U.S. Department of Labor
Anthropogenic uses	Department of Labor and Workforce Development, Research and Analysis: Alaska Local and Regional Information: Population Estimates	Department of Labor's Research and Analysis section created the Alaska Local and Regional Information (ALARI) database as a profile generator of different datasets. This particular dataset provides descriptive data about the unemployment rate in Alaska communities	table	current & historic		U.S. Department of Labor
Anthropogenic uses	Department of Labor and Workforce Development, Research and Analysis: Alaska Local and Regional Information: Occupations	Department of Labor's Research and Analysis section created the Alaska Local and Regional Information (ALARI) database as a profile generator of different datasets. This particular dataset provides descriptive data about the unemployment rate in Alaska communities	table	current & historic		U.S. Department of Labor

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Anthropogenic uses	Department of Labor and Workforce Development, Research and Analysis: Alaska Local and Regional Information: Tax	Department of Labor's Research and Analysis section created the Alaska Local and Regional Information (ALARI) database as a profile generator of different datasets. This particular dataset provides data about various forms of tax revenue for Alaskan communities.	table	current & historic		U.S. Department of Labor
Anthropogenic uses	Department of Labor and Workforce Development, Research and Analysis: Alaska Local and Regional Information: Industries	Department of Labor's Research and Analysis section created the Alaska Local and Regional Information (ALARI) database as a profile generator of different datasets. This particular dataset provides data about the industries that employ the most local labor specific to an Alaska community.	table	current & historic		U.S. Department of Labor
Anthropogenic uses	Department of Labor and Workforce Development, Research and Analysis: Alaska Local and Regional Information: 2010 Census	Department of Labor's Research and Analysis section created the Alaska Local and Regional Information (ALARI) database as a profile generator of different datasets. This particular dataset provides data about the 2010 Census Data demographic profile of Alaska communities	table	current & historic		U.S. Department of Labor
Anthropogenic uses	Area Cost Differential Studies, McDowell Group	table of numbers for the cost of living differentials of the communities in the NS area; numbers computed relative to cost of living in Anchorage	table	current & historic		

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Anthropogenic uses	Alaska Energy Authority Renewable Energy Atlas of Alaska: Biomass, Fish Processors	point locations of known fish processing plants in the state	raster	current		Alaska Energy Authority
Anthropogenic uses	Alaska Energy Authority Renewable Energy Atlas of Alaska: Biomass, Landfills	point locations of known landfills in the state	raster	current		Alaska Energy Authority
Anthropogenic uses	Alaska Energy Authority Renewable Energy Atlas of Alaska: Biomass, Sawmills	point locations of known sawmills in the state	raster	current		Alaska Energy Authority
Anthropogenic uses	Alaska Energy Authority Renewable Energy Atlas of Alaska: Energy Infrastructure	point locations of energy infrastructure. Variables include utility type, megawatts (MWh) of oil, gas, coal, hydro, wind, biodiesel, and geothermal.	raster	near-term		Alaska Energy Authority
Anthropogenic uses	Alaska Energy Authority Renewable Energy Atlas of Alaska: Geothermal, Hot Springs	point locations of hot springs in the state	raster	current		Alaska Energy Authority
Anthropogenic uses	Alaska Energy Authority Renewable Energy Atlas of Alaska: Geothermal, Thermal Areas	point locations of thermal areas in the state	raster	current		Alaska Energy Authority
Anthropogenic uses	Alaska Energy Authority Renewable Energy Atlas of Alaska: Geothermal, Volcano	point locations of volcanoes in the state	raster	current		Alaska Energy Authority

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Anthropogenic uses	Alaska Energy Authority Renewable Energy Atlas of Alaska: Hydroelectric, Existing	point locations of existing hydroelectric facilities	raster	current		Alaska Energy Authority
Anthropogenic uses	Alaska Energy Authority Renewable Energy Atlas of Alaska: Hydroelectric, Potential	point locations of potential areas for hydroelectric facilities	raster	near-term		Alaska Energy Authority
Anthropogenic uses	Alaska Energy Authority Renewable Energy Atlas of Alaska: Infrastructure, Electric Transmission Lines	locations of transmission lines in the state	raster	current		Alaska Energy Authority
Anthropogenic uses	Alaska Energy Authority Renewable Energy Atlas of Alaska: Infrastructure, Natural Gas Lines	locations of natural gas lines in the state	raster	current		Alaska Energy Authority
Anthropogenic uses	Alaska Energy Authority Renewable Energy Atlas of Alaska: Renewable Energy Fund Sites	site locations of renewable energy plants, variables include grant amount and project name	raster	current		Alaska Energy Authority
Anthropogenic uses	Alaska Energy Authority Renewable Energy Atlas of Alaska: Solar	monthly breakdown of quantity of solar exposure areas in the state receive	raster	current		Alaska Energy Authority
Anthropogenic uses	Alaska Energy Authority Renewable Energy Atlas of Alaska: Energy Development Regions	regions in the state that have been classified as possible regions for future energy development	raster	near-term		Alaska Energy Authority

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Anthropogenic uses	American Community Census 2011: Education Profile	In depth profile of various economic variables for communities in the state. Variables include employment status, median earnings, employment breakdown, insurance and other benefits received, percent living below poverty line, and per capita income	table	current & historic		
Anthropogenic uses	American Community Census 2011: Economic Profile	In depth profile of various education variables for communities in the state. Variables include educational attainment by age and by sex	table	current & historic		
Anthropogenic uses	American Community Census 2011: Age and Sex	In depth profile of various age and sex variables for communities in the state. Variables include age reported by sex and child dependency ratios	table	current & historic		
Anthropogenic uses	American Community Census 2011: Net In-Migration	In depth profile of change in population net of estimated births and deaths as a percent of population	table	current & historic		

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Anthropogenic uses	AK Dept. of Environmental Conservation: Contaminated Sites with Mercury	ADEC Contaminated Sites Program (CSP) manages the cleanup of contaminated soil and groundwater in Alaska. This list contains mercury contaminated sites within the CSP Database. It includes Active sites as well as those with Cleanup Complete or Cleanup Complete - Institutional Controls status.	unknown	historic		Alaska Department of Environmental Conservation, Alaska Department of Health and Social Services, Arctic Monitoring and Assessment Program, National Oceanic and Atmospheric Administration
Anthropogenic uses	AK Hair Mercury Biomonitoring Program	The Statewide Hair Mercury Biomonitoring Program was started to obtain information about exposures to mercury among women of childbearing age in Alaska. In high doses, mercury can have subtle harmful effects on the neurodevelopment of an unborn fetus. The Alaska Hair Mercury Biomonitoring Program focuses on all women of childbearing age, ages 15-45 years.	unknown	historic		Alaska Department of Environmental Conservation, Alaska Department of Health and Social Services, Arctic Monitoring and Assessment Program, National Oceanic and Atmospheric Administration

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Anthropogenic uses	USGS: Environment Geochemistry of Mercury Mines in AK	The U.S. Geological Survey (USGS), in cooperation with the U.S. Bureau of Mines, U.S. Fish and Wildlife Service, and Calista Corporation (an Alaska native corporation), is investigating potential environmental contamination around naturally occurring, mercury-rich mineral deposits in Alaska.	unknown	historic		Alaska Department of Environmental Conservation, Alaska Department of Health and Social Services, Arctic Monitoring and Assessment Program, National Oceanic and Atmospheric Administration
Anthropogenic uses	USGS: Alaska Infrastructure 1: 63,360	This data depicts trail locations in Alaska as digitized primarily from 1:24,000, 1:63,360, and 1:250,000 USGS quadrangles.	raster	current		Alaska State Geo-Spatial Data Clearinghouse
Anthropogenic uses	USGS: Alaska Infrastructure 1: 63,361	This data depicts telephone line locations in Alaska as digitized primarily from 1:24,000, 1:63,360, and 1:250,000 USGS quadrangles.	raster	current		Alaska State Geo-Spatial Data Clearinghouse
Anthropogenic uses	USGS: Alaska Infrastructure 1: 63,362	Statewide roads were selected from the USGS 1:2,000,000 Digital Line Graphs (DLGs) database with the following arc attributes for MIN: 5020 Primary 4028 Secondary (all weather, hard surface) 5031 Light Duty (all weather, improved) 5041 Unimproved (fair or dry weather) 5051 Proposed 5062 Ferry Auto	raster	current		Alaska State Geo-Spatial Data Clearinghouse

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Anthropogenic uses	USGS: Alaska Infrastructure	historic trails in the state, including the Iditarod trails	raster	historic		Alaska State Geo-Spatial Data Clearinghouse
Anthropogenic uses	FAA Alaska Airports and Runways 1995	This information was received from the FAA in February 1995. This information was processed in SAS to create points for the airports and lines for the runways.	raster	historic		Alaska State Geo-Spatial Data Clearinghouse
Anthropogenic uses	AK General Land Status	Land ownership and status records used to create this coverage are extracted from two major sources: Bureau of Land Management (BLM) and the State of Alaska Department of Natural Resources (ADNR). This coverage uses data extracted from BLM's records, stored in Alaska Land Information System (ALIS) on July 2, 2012; and ADNR's land records stored in the Land Administration System (LAS) on July 12, 2012.	raster	current		Alaska Bureau of Land Management Alaska Department of Natural Resources
Anthropogenic uses	AK Dept. of Fish and Game: Community Subsistence Information System, CSIS	The CSIS is the repository of Alaska community harvest information gathered by the Alaska Department of Fish and Game, Division of Subsistence.	table	current & historic		Alaska Department of Fish and Game
Anthropogenic uses	AK Dept. of Fish and Game: Hunting Maps and Area Information	reported by game management unit (GMU) and species, annual harvest levels	table	current & historic		Alaska Department of Fish and Game Commercial Fisheries Entry Commission

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Anthropogenic uses	AK Dept. of Fish and Game: Commercial Fishing	reported by management areas and limited amount of species, annual harvest levels	table	current & historic		Alaska Department of Fish and Game Commercial Fisheries Entry Commission
Anthropogenic uses	AK Dept. of Fish and Game: Sport Fishing,	reported by place name, this database includes the fish count data search and sport fishing survey	table	current & historic		Alaska Department of Fish and Game Commercial Fisheries Entry Commission
Anthropogenic uses	Alaska Resource Data File, U.S. Geological Survey	description of mines, prospects, and mineral occurrences	table	current & historic		Alaska Resource Data File from U.S. Geological Survey
Anthropogenic uses	Alaska Resource Data File, U.S. Geological Survey	descriptions of mines, prospects, and mineral occurrences	table	current & historic		Alaska Resource Data File from U.S. Geological Survey
Anthropogenic uses	Water Permit	Applicants' names, application status description, application status date, section.	table	current & historic		AK DNR
Anthropogenic uses	Department of Labor and Workforce Development, Research and Analysis: Alaska Local and Regional Information: Unemployment rate	Department of Labor's Research and Analysis section created the Alaska Local and Regional Information (ALARI) database as a profile generator of different datasets. This particular dataset provides data about the unemployment rate in Alaska communities.	table	current & historic		U.S. Department of Labor

Topic	Dataset Name	Description	Data Type	Temporal	Related CE,CA,MQ or Source	Source Agency
Anthropogenic uses	TIGER/Line Shapefile, 2010, 2010 state, Alaska, 2010 Census Place State-based	TIGER/ Line Files are shapefiles and related database files (.dbf) that are an extract of selected geographic and cartographic information from the U.S. Census Bureau's MAF/ TIGER database. This data provides geospatial locations of places in Alaska.	raster	current		U.S. Census
Anthropogenic uses	TIGER/Line Shapefile, 2010, 2010 state, Alaska, 2010 Census Place State-based	TIGER/ Line Files are shapefiles and related database files (.dbf) that are an extract of selected geographic and cartographic information from the U.S. Census Bureau's MAF/ TIGER database. This data provides geospatial locations of boroughs in Alaska	raster	current		U.S. Census